

Sample documentation for web-based gaming system assignment



SOFTWARE PROJECT PLAN 1. 0 Introduction Education, as most parents tell their children, is the only treasure that cannot be stolen nor taken away. This is a very important tool to fight life's storms in every human endeavor. The more the person reaches a certain level of education, the wiser he is to battle such circumstances. Level of education is determined how knowledgeable someone is in every subject matter the entire universe has to offer. Elementary education is the most essential early stage to nurture and sharpen an individual's skills and abilities.

This is where a child learns the basics of the world he was destined to live and springs the source of knowledge he ought to apply for the span of a lifetime. However, studies have shown that there exists "brain drain" which gradually reduces large amount of information that the world needs to know especially the basic ones. For these disturbing facts, there is an intense need to cultivate these basics as early as a child steps his grade years. On the other hand, in today's modern era, technology has already invaded almost the entire world in a very swift instance.

Something that is so powerful and influential that can make or break the entire universe. Computerization and networking serve as gateways to global competency. The use of these things has brought about major change to human lives and hastened daily undertakings yet not just limited to such effects. Recognizing the importance of the two giant entities, the VAWIKI Online Brain Teaser intertwines education and technology into a tandem that aims to sharpen, enhance and broaden pupils' brain incorporated with fun and critical thinking through various questions with corresponding answers related to specific subject matters. . 1 Project Scope The project is a web-
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based gaming system designed for sixth graders ranging from ten to twelve years old. It allows pupils to review lessons from their past years in grade school, and enhances their analytical and memory skills in a particular branch of knowledge. The target users must create an account before enjoying the benefits the system offers. To create an account, the users need to fill in their personal information as needed by the personal information sheet page. A user account is uniquely identified by its User ID.

After signing up, users are already free to start playing the game and be teased with a variety of questions and answers. Before the users answer the questions, they must choose a subject matter to start the game with.

National flags of the world, simple arithmetic (addition, subtraction, multiplication, and division), basic vocabulary, color wheel, Philippine history and general science are the specific subject matters the system focuses on.

However, the users are free to change a subject from time to time as they prefer to.

1. 2 Major Software Functions

- Membership- allows a user to create an account.
- Log-in- allows the user to enter the system.
- Subject selection- allows the user to start a game or change another topic to play with.
- Edit profile -allows the user to edit his personal information.
- View profile -allows the user to view his personal information and progress in the game.
- Q & A Portion- allows the user to gain points whenever a correct answer is picked from the given choices with its corresponding question.

- Level up- changes the level status of the user.
- Rewarding- awards a user with a trophy after completing all levels of a topic.
- Log-out- allows the user to end a session.

3 Management and Technical Constraints

- The user is not a sixth grader.
- The gaming system doesn't cover all possible subject

matters from the user's previous lessons. 2. 0 PROJECT ESTIMATES 2. 1

Historical data used for estimates SALARY PositionRate/hrSalary = (Rate/hr * 8hrs/day * 20 days * 4 months) Project LeaderPhp. 300. 00Php. 192, 000. 00 Web DesignerPhp. 200. 00Php. 128, 000. 00 ProgrammerPhp. 200. 00Php. 128, 000. 00 System AnalystPhp. 200. 00Php. 128, 000. 00 Total: Php. 576, 000. 00 OFFICE SUPPLIES DescriptionUnitsPriceAmount Printer Ink Set4Php. 1, 100. 00Php. 4, 400. 00

Long Bond Paper Rim2Php. 472. 00Php. 944. 00 Total: Php. 5, 344. 00

UTILITY DescriptionDuration(month)PriceAmount Electricity4Php. 1, 500.

00Php. 6, 000. 00 Internet(4 connections)4Php. 4, 000. 00Php. 16, 000. 00

Total: Php. 22, 000. 00 MISCELLANEOUS DescriptionNo. of

peoplePriceAmount= (Price x No. of people x 20 days x 4 months) Food &

Transportation4Php. 100. 00Php. 32, 000. 00 Total: Php. 32, 000. 00 Cost

Summary: Salary – Php. 576, 000. 00 Office Supplies – Php. 5, 344. 00 Utility

– Php. 22, 000. 00 Miscellaneous -Php. 32, 000. 00 Sub-Total – Php. 59, 344.

00(Office Sup+Utility+Misc) Inflation Rate – 0. 5 – Php. 68, 245. 60 {[Sub-

Total x Inflation Rate] + Sub-Total} GRAND TOTAL- Total – Php. 644, 245. 60

2. 2 Estimation techniques applied and results We have determined that our

project fits the characteristics of Organic Mode. We estimate our project will

have 2, 900 Delivered Source Instructions. Using the formula, we can

estimate: Effort = $2.4 * (2.9)^{1.05} = 7$ man-months Schedule = $2.5 * (7)^{0.38} = 5$ months

Productivity = $2900 \text{ DSI} / 7 = 414 \text{ DSI} / \text{mm}$ Average Staffing

= $7\text{mm} / 5 \text{ mo} = 1 \text{ FSP}$ 3. 0 RISK MANAGEMENT PROJECT DETAILS Project

Name: VAWIKI Online Brain Teaser Project Manager: Kim C.

Honoridez RISK DETAILS Risk ID: risk01 Raised By: Winston E. Tabar Date Raised: 07/31/09 Risk Description: The user joins and enters the game even if he is not on the allowable age bracket of a grade six student. This will not promote equal experience between grade 6 students due to the relative age range of pupils. Risk Likelihood: High Risk Impact: Low RISK MITIGATIONS Recommended Preventive Actions: Each user should verify their ages with parental and school note that he is on the allowable age bracket. Recommended Contingent Actions: The account caught violating this scope should be deleted.

PROJECT DETAILS Project Name: VAWIKI Online Brain Teaser Project Manager: Kim C. Honoridez RISK DETAILS Risk ID: risk02 Raised By: Vanessa Richie R. Alia Date Raised: 07/31/09 Risk Description: If the database will collapse, the accounts with their respective levels and points will be lost that would probably irritate its users. Risk Likelihood: Low Risk Impact: High RISK MITIGATIONS Recommended Preventive Actions: The system should duplicate its database by using RAID disk drives to duplicate the informations stored within the system. Recommended Contingent Actions:

Recover the database by retrieving the duplicated data from the RAID disk drives. 4. 0 PROJECT SCHEDULE 4. 1 Project task set 4. 2 Functional Decomposition 4. 3 Task network 4. 4 Timeline Chart 5. 0 STAFF ORGANIZATION 5. 1 Team Structure Fig. 5. 1: Team Structure Honoridez, Kim C. Positions: Project Leader, System Analyst, Web Designed, Lay-out Artist Duties and Responsibilities: Project Leader Leads and manages the team and its activities. System Analyst Analyzes the system and generate solutions to

problems encountered. Web Designer Assures the design of the web application of the project. Lay-out Artist

Does the lay-outing of each web page's design template. Alia, Vanessa
Richie R. Positions: System Developer, Web Designer, Lay-out Artist,
Document Officer Duties and Responsibilities: System Developer Develops
the project and gives what necessary tools to use. Web Designer Assures the
design of the web application of the project. Lay-out Artist Does the lay-
outing of each web page's design template. Document Officer Does the
documentation and keeps records in every project activity. Villaber, Rajiv
Jericho P. Positions: Document Officer, Web Designer, Graphic Artist, Lay-out
Artist Duties and Responsibilities:

Document Officer Does the documentation and keeps records in every
project activity. Web Designer Assures the design of the web application of
the project. Graphic Artist Edits and develops graphics necessary in the
application domain. Lay-out Artist Does the lay-outing of each web page's
design template. Tabar, Winston E. Positions: System Evaluator, Web
Designer, Database Designer, Lay-out Artist Duties and Responsibilities:
System Evaluator Evaluates the system to ensure efficiency, functionality
and integrity of the entire system. Web Designer

Assures the design of the web application of the project. Database Designer
Designs an efficient, effective and reliable database to be used by the
system. Lay-out Artist Does the lay-outing of each web page's design
template. 5. 2 Management reporting and communication All ideas including
comments and suggestions are directly handed to the project leader and the

project leader is the one responsible to disseminate information in an invoked meeting. Either of the two document officer is the one responsible to prepare the minutes of the meeting. SYSTEM SPECIFICATION 1. 0

Introduction . 1Goals and objectives •To enhance the manual procedures of a typical mastery exercise through an online review system •To incorporate elementary lessons into the latter system •To provide a convenient way of assessing the pupils level of knowledge in a particular subject matter 1.

2System statement of scope Philippine education system usually uses textbooks and test papers for review purposes. The manual review examination comprises the preparation of the questionnaires by the teacher, answering the questionnaires by the students, checking of answer sheets and giving of results.

As these are being conducted, stakeholders experience disadvantages. These disadvantages trigger the need to develop a better and more reliable system. Thus, the VAWIKI Online Brain Teaser is proposed. The VAWIKI Online Brain Teaser is a web-based system designed for sixth-graders ranging from ten to twelve years old. It allows pupils ton review lessons from their past years of school and enhances their analytical and memory skills in a particular branch of knowledge. The target users must create an account before enjoying the benefits the system offers.

To create an account, the users need to fill in their personal information as needed by the personal information sheet page. A user account is uniquely identified by its User ID. After signing up, users are already free to start playing the game and be teased with a variety of questions and answers.

Before the users answer the questions, they must choose a subject matter to <https://assignbuster.com/sample-documentation-for-web-based-gaming-system-assignment/>

start the game with. However, the users are free to change a subject matter from time to time. The users need to respond an answer from the generated set of questions in relation to his chosen subject matter given a set of choices.

As they correctly answer the given set of questions, points are gained.

Badges are given to the users if they reach a certain goal specified by the system. The users can choose to log-out anytime they want to as long as they click on the log-out link. Same applies when users want to log-in to their accounts.

1. 3System context The existing manual review system is conducted ion a tedious way. The teacher prepares the review questionnaires selected from a wide variety of questions from different topics of different subject matter from the entire elementary years of pupils. Then, multiple copies are produced to be distributed.

During review exams, pupils answer the questions in written form. After a certain time, the teacher collects and checks the answer sheets. Afterwards, the checked answer sheets reflecting the scores are returned to the pupils.

1. 4Major constraints The following are the major constraints of the present system:

- the preparation of questionnaires are time consuming;
- the questionnaires' graphical quality is inconsistent;
- answering questions through handwriting is tedious and requires sufficient ink;
- manual checking results to unreliable feedback of scores;
- answer sheets are unsecured; and

lastly, feedback to the pupils regarding their scores takes a long time.

Functional and Data Description

2. 1 System architecture

2. 1. 1 Architecture model (e. g. , ACD) (Please see next page.)

Legacy System	Proposed System
2. 1. 2 Subsystem overview	The review examinations system (RES) basically

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has two stakeholders: teacher and pupil. The teacher prepares and provides review questionnaire for the RES where the pupil receives it to answer. The answer sheet of the pupil will encounter processes of the RES and will be received by the teacher.

The teacher then returns the checked answer sheets with the score gained corresponding to the correct answers incurred. The checked answer sheets will be received by the pupil afterwards.

2. 2 Data Description

2. 2. 1 Major data objects

PUPIL PNameThe name of the pupil composed of his/her first and last names, and middle initial; has 50 characters maximum length
BdateThe birthdate of the pupil to identify his/her age range having the format mm/dd/yy
SectionThe section of the class where the pupil belongs to; has 10 characters maximum length

QUETIONNAIRE PNameThe name of the pupil who answered the questionnaire; composed of his/her first and last names, and middle initial having 50 characters maximum length
SectionThe section of the class where the pupil belongs to; has 10 characters maximum length
TNameThe name of the teacher responsible for a given subject matter in relation to the questionnaire; includes his/her first and last name, and middle initial with 50 characters max ength
SubjectThe subject matter of the review questionnaire with 20 characters max length
QuestionQuestions related to the lessons of the subject matter reviewed with 100 characters max length
ChoicesComprise a set of possible answers to a given question having a correct answer; with 200 characters max length
AnswerThe correct answer to a given question; with 50 characters max length
scoreThe total points gained by the pupil by choosing the correct answers to the questions in a

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particular test questionnaire; it is integer in type TEACHER NameThe full name of the teacher who teaches a particular subject matter incurred by the pupil; has 50 characters max length subj_handledSubject handled by the teacher and has 20 characters maximum length sectionSection of the class handled by the teacher and has 10 characters max length 2. 2. 2

Relationships 2. 3 Interface Description 2. 3. 1 Machine interfaces

- Photocopy Machine- a machine that produces multiple copies of a given questionnaire prepared by the teacher for review purposes 2. 3. 2 External system interfaces
- Calculator- used to calculate scores and grades of pupils

2. 3. 3 Human interface Teacher-prepares questionnaires, conducts review examinations and checks answer 3. 0 Subsystem Description 3. 1 Description for Subsystem n 3. 1. 1 Subsystem scope The manual review examination is a subsystem of a very large and complex Education System which applies in the Philippine setting. As shown in Figure 3. 1. 1, the latter is broken down into several subsystems according to the different levels of education. Considering the Primary level education subsystem, it is composed of another subsystems including teaching, co- and extra-curricular, examination, grading and other systems.

These involves lesson discussions, activities related to the academe, activities on culture and sports, assessment of pupils intellectual prowess in relation to lectures, and computing of grades respectively. The examination system is categorized as quiz, review exam, assignment, periodical exam and other major exam. Review examination system is a category of the examination system and a sub-subsystem of the Education System. 3. 1. 2

Subsystem flow diagram 3. 1. 3 Subsystem Components 4. 0 Project Issues
4. 1 Projected development costs LABOR

PositionRate/hrSalary = (Rate/hr * 8hrs/day * 20 days * 4 months) Project
LeaderPhp. 300. 00Php. 192, 000. 00 Web DesignerPhp. 200. 00Php. 128,
000. 00 ProgrammerPhp. 200. 00Php. 128, 000. 00 System AnalystPhp. 200.
00Php. 128, 000. 00 Total: Php. 576, 000. 00 OFFICE SUPPLIES

DescriptionUnitsPriceAmount Printer Ink Set4Php. 1, 100. 00Php. 4, 400. 00
Long Bond Paper Rim2Php. 472. 00Php. 944. 00 Total: Php. 5, 344. 00

UTILITY DescriptionDuration(month)PriceAmount Electricity4Php. 1, 500.
00Php. 6, 000. 00 Internet(4 connections)4Php. 4, 000. 00Php. 16, 000. 00
Total: Php. 22, 000. 00 MISCELLANEOUS DescriptionNo. f

peoplePriceAmount= (Price x No. of people x 20 days x 4 months) Food &
Transportation4Php. 100. 00Php. 32, 000. 00 Total: Php. 32, 000. 00 Cost
Summary: Salary – Php. 576, 000. 00 Office Supplies – Php. 5, 344. 00 Utility
– Php. 22, 000. 00 Miscellaneous – Php. 32, 000. 00 Sub-Total – Php. 59, 344.
00(Office Sup+Utility+Misc) Inflation Rate – 0. 15 – Php. 68, 245. 60 {[Sub-
Total x Inflation Rate] + Sub-Total} Grand Total – Php. 644, 245. 60 4. 2

Project schedule SOFTWARE REQUIREMENTS SPECIFICATION 1. 0

INTRODUCTION 1. 1 GOALS AND OBJECTIVES The software aims to: •Help
grade 6 students review their past lessons. Let the target users answer
review exams in playful way. •Provide a convenient way to answer and
check an exam. •Provide quick feedback mechanism on the user's
performance. •Provide an automated procedure of the typical review
questionnaire. 1. 2 STATEMENT OF SCOPE The VAWIKI OBT is designed for
sixth-graders ranging from ten to twelve years old and is a web-based

system. It allows pupils to review lessons from their past years of school and enhances their analytical and memory skills in a particular branch of knowledge. The target users must create an account before enjoying the benefits the system offers.

To create an account, the users need to fill in their personal information as needed by the personal information sheet page. A user account is uniquely identified by its User ID. After signing up, users are already free to start playing the game and be teased with a variety of questions and answers. Before the users answer the questions, they must choose a subject matter to start the game with. However, the users are free to change a subject matter from time to time. The users need to respond an answer from the generated set of questions in relation to his chosen subject matter given a set of choices.

As they correctly answer the given set of questions, points are gained.

Badges are given to the users if they reach a certain goal specified by the system. The users have an option to log-out anytime they want to as long as they click on the log-out link and can log-in by clicking the log-in link. 1. 3

SOFTWARE CONTEXT The user is given a wide variety of options on an easily manner. User registers or logs in to the system as a pre-requisite to play games in the system. When the user is verified as a member to the system, he/she then chooses to play or choose a desired subject first before playing.

In playing the game, the system generates randomly a question according to its subject & level. The user then answers the question by clicking to one of the four choices given to be submitted and verified. After answering all

questions for that certain level the user is assessed with its score. If he passed (7 correct answers out of 10), he will be through to the next level until he completes all subjects. Once the log-out link or a successful user account deletion is made, all the sessions are destroyed.

1. 4 MAJOR

CONSTRAINTS The following are the major constraints of the proposed

system:

- The user is not a grade six level. The gaming system does not cover all possible subject matters from the user's previous lessons.
- Images loads slowly when the software is used in a slow processing computer unit.

- The software has no control over the webhost. (Ex. Webhost encounters problems and executes maintenance making the software unavailable temporarily on the internet.)

2. 0 USAGE SCENARIO 2. 1 USER PROFILES The

System User is the user of the system who interacts with the VAWIKI Online Brain Teaser. He logs-in the system and does functions like playing and etc.

2. 2 USE-CASES 2. 3 USE CASE STORIES

Use Case: Navigate to the system home page Description: System User

makes necessary actions in accessing the system home page Details: User

opens the browser. User types the URL in the address bar. User presses the enter key or clicks the enter button. User is directed to the home page. Pre-

condition: User has a computer and browser. User has an internet

connection. User has already booted the computer. Post-condition: User is on

the home page of the system. Use Case: Delete user account Description:

System User wants to erase his account in the system Details: User clicks on the delete button.

User is directed to the Delete User Account page where he/she is required to

type the password. User clicks on the delete button. User is prompted if
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he/she really wants to delete his/her account/ If yes, user is directed to the Home page If no, user is redirected to the Profile page. Pre-condition: User browser has already loaded system Profile Page. User already has a VAWIKI Online Brain Teaser account. User has already logged-in. Post-condition: Either user is on the Home page or Profile page. Use Case: Register an account Description: System User creates an account in the system in order to play the game Details:

The system user clicks the membership link. The user is directed to the registration page. The user inputs his/her first and last name, gender, username, password and email address. User selects his/her age and middle initial from each drop down menu. User clicks on the Sign-up button. System checks if username already exists in the database If no, user account is added to the system and user is directed to the Subject page. If it already exists, the system prompts the user that “ Username already exist” and user has to input another username until the username inputted is valid and available. Pre-condition:

User browser has already loaded system Home page. Post-condition: User is registered and is on the Subject page. Use Case: Select a topic Description: System User chooses a topic from the Subject page Details: User clicks the subject link. User is directed to the Subject page. User clicks the selected topic of a subject. User is directed to the Play Now page of the selected topic. Pre-condition: User has already logged-in. Post-condition: User is on the Play Now page. Use Case: Answer questions Description: System User selects an answer from the choices given in the Play Now page Details:

User may select a topic or click the Play Now link. User is directed to the Play Now page of the selected or default topic. User clicks on the selected answer. System prompts the user if it is his/her final answer. If the user clicks ' yes', the correct answer is highlighted and the user will be directed to the next question. If the user clicks ' no', he/she can select any answer among the three choices of the same question and be prompted again until he/she clicks ' yes'. Pre-condition: User has already logged-in. Post-condition: User is on the next question.

Use Case: View profile Description: System User clicks on the Profile link Details: User clicks on the Profile link User is directed to the Profile page. Pre-condition: User has already logged-in. Post-condition: User is on the Profile page. Use Case: View instructions Description: System User views the instruction in playing the game by clicking the Help link Details: User clicks on the Help link. User is directed to the Help page Pre-condition: User browser has already loaded any VAWIKI system page. Post-condition: User is on the Help page. Use Case: Enter the system

Description: Registered user enters the system by signing in Details: The system user clicks the Log-In link. The user is directed to the Log-In page. User inputs the username and password. User clicks the Sign-In button. The system verifies the username and password. If username exists in the system and the entered password corresponds to the appropriate password, user is directed to the Subject page. If not, the user has to retype his/her username and password until it is valid. Pre-condition: User browser has already loaded system Home Page. User already has a valid VAWIKI Online Brain Teaser account.

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Post-condition: User is on the Subject page. Use Case: End session

Description: Systems User logs out of the system Details: User clicks on the Log-out link. User is directed to the system Home page. Pre-condition: User has already logged-in. Post-condition: User is on the home page. 3. 0 DATA

MODEL AND DESCRIPTION 3. 1 DATA DESCRIPTION 3. 1. 1 DATA OBJECTS

User •fname- the first name of the user with 30 characters maximum length

•mi- the middle initial of the user with a single character •lname- the last

name of the user with 30 characters maximum length •age- the age of the

user with type integer address- the address of the user with 50 characters

maximum length •school- the name of the scholl with 50 characters

maximum length •gender- the gender of the user with a single character;

whether F or M •username- the unique name assigned by the user for his/her

identification with 30 characters •password- the password of the user to

serve as a security measure for his/her user account with 30 characters

maximum length •e-mail- the email address of the user with 30 characters

maximum length

Question •questID- a unique code for a specific question composed of the

topicID and the current level separated by a hyphen, has 6 characters

maximum length •topicID- a unique code given to a specific topic for a

certain subject and has 2 characters only •question- a question related to a

specific topic of a certain subject with 100 characters maximum length

•answer- the correct answer to a given question with 30 characters

maximum length

Score •topicID- a unique code given to a specific topic for a certain subject

and has 2 characters only •score- the accumulated points gained by the user

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after answering 7 correct answers or more out of 10 questions on each level per topic with type integer

Topic •topicID- a unique code given to a specific topic for a certain subject and has 2 characters only •topic- the description of the topic with 30 characters maximum length

Choices questID- a unique code for a specific question composed of the topicID and the current level separated by a hyphen, has 6 characters maximum length •choice1- the first choice of a given question which may or may not be the correct answer, has 30 characters maximum length •choice2- the second choice of a given question which may or may not be the correct answer, has 30 characters maximum length •choice3- the third choice of a given question which may or may not be the correct answer, has 30 characters maximum length

3. 1. 2 RELATIONSHIPS 3. 1. 3 DATA DICTIONARY Name: fname Aliases: first name, given name

Where/How to use: Read fname(input) View fname(output) Description: fname=[name| name+symbol+fname] name=[A-Z| a-z| name] symbol=[|-]

Format: Alphabetic data Name: mi Aliases: middle initial Where/How to use: Read mi(input) View mi(output) Description: mi=[A-Z] Format: Alphabetic data Name: lname Aliases: last name, family name, surname Where/How to use: Read lname(input) View lname(output) Description: lname=[name| name+symbol+lname] name=[A-Z| a-z| name] symbol=[|-] Format: Alphabetic data Name: age Aliases: Age Where/How to use: Read age(input) View age(output) Description: age=[0-9| age] Format: numeric data

Name: gender Aliases: Gender, Sex, Sexual preference Where/How to use: Read gender(input) View gender(output) Description: gender=[F| M] Format: Alphabetic data Name: address Aliases: Address, Location, Place Where/How

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to use: Read address(input) View address(output) Description:

address=[place| number+address| number+symbol+address] place=[name|

name+symbol+place] symbol=[|,|. |-] symbol] name=[A-Z| a-z| name]

number=[0-9| number] Format: Alphanumeric data Name: school Aliases:

School, academy, institute, university Where/How to use: Read school(input)

View school(output) Description: school=[place| place+symbol+school]

lace=[name| number+symbol= place] name=[A-Z| a-z| name] symbol=[|-|. |

| symbol] number=[0-9| number] Format: Alphanumeric data Name:

username Aliases: User name, Screen name Where/How to use: Read

username(input) View username(output) Description: username=[user|

user+username] user=[word| number| symbol| user] word =[A-Z| a-z| word]

number=[0-9| number] symbol=[-| _] Format: Alphanumeric data Name:

password Aliases: password, security code, PIN code Where/How to use:

Read password(input) View password(output) Description: password=[pin|

pin + password] pin=[word | number| symbol| pin] word =[A-Z| a-z| word]

number=[0-9| number] ymbol=[-| _] Format: Alphanumeric data Name: e-

mail Aliases: e-mail, e-mial address, electronic mail, e-mail ad Where/How to

use: Read e-mail(input) View e-mail(output) Description: e-

mail=[e_ad+domain] e_ad=[username| username+e_ad] username=[word|

number| symbol] domain=[@+word+. +word| domain+. +word] word=[A-Z|

a-z| word] number=[0-9| number] symbol=[_|-|. | symbol] Format:

Alphanumeric data Name: questID Aliases: Question ID, Question number,

Question code Where/How to use: View questID(output) Description:

questID=[topicID+-+levelNumber+number] topicID=[a-z+number]

levelNumber=[1-5] number=[0-9| number]

Format: Alphanumeric data Name: topicID Aliases: Topic ID, Question number, Question code Where/How to use: View topicID(output) Description: topicID=[a-z+number] number=[0-9| number] Format: Alphanumeric data Name: question Aliases: Question Where/How to use: View question(output) Description: question=[quest| quest+question] quest=[word| number| symbol| word=[A-Z| a-z| word] number=[0-9| number] symbol=[|+|-|*|/? |. |! |,| symbol] Format: Alphanumeric data Name: answer Aliases: Answer, correct choice Where/How to use: Read answer(input) Analyze answer(input) Description: question=[quest| quest+question] quest=[word| number| symbol| ord=[A-Z| a-z| word] number=[0-9| number] symbol=[|+|-|*|/? |. |! |,| symbol] Format: Alphanumeric data Name: score Aliases: Score, points, grade Where/How to use: View score(output) Accumulate score(input) Description: score=[0-9| score] Format: Numeric data Name: topic Aliases: Topic Where/How to use: Read topic(input) View topic(output) Description: topic=[letter| letter+symbol+topic] letter=[A-Z| a-z| letter] symbol=[] Format: Alphabetic data Name: choice1 Aliases: First choice Where/How to use: Read choice1(input) View choice1(output) Description: choice1=[choice| choice+choice1] choice=[word| number| symbol] word=[A-Z| a-z| word] number=[0-9| number] symbol=[|+|-|*|/? |. |! |,| symbol] Format: Alphanumeric data Name: choice2 Aliases: Second choice Where/How to use: Read choice2(input) View choice2(output) Description: choice2=[choice| choice+choice2] choice=[word| number| symbol] word=[A-Z| a-z| word] number=[0-9| number] symbol=[|+|-|*|/? |. |! |,| symbol] Format: Alphanumeric data Name: choice3 Aliases: Third choice Where/How to use: Read choice3(input) View choice3(output) Description: choice3=[choice| choice+choice3] choice=[word| number| symbol] word=[A-Z| a-z| word]

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number=[0-9| number] symbol=[|+|-|*|/|? |. |! |,| symbol] Format:

Alphanumeric data 4. FUNCTIONAL MODEL AND DESCRIPTION 4. 1

DESCRIPTION FOR FUNCTION N 4. 1. 1 PROCESSING NARRATIVE (PSPEC) FOR
 FUNCTION N INITIALIZE flag to 0 GET username, password IF username=
 NULL ESTABLISH Link to Host ESTABLISH Connection to Database SEARCH
 username IN Database IF FOUND COMPARE corresponding password with the
 inputted password IF MATCH SET flag to 1 START Session STORE username
 AS Session Data[username] SET Session Data[tempScore] to 0 LOAD Subject
 Page ENDIF ENDIF ENDIF IF flag= 0 PRINT “ Username and Password
 mismatched! ” RELOAD Log-in Page ENDIF GET username, password, e-mail,
 fname, mi, lname, age, gender

ESTABLISH Link to Host ESTABLISH Connection to Database SEARCH
 username IN Database IF NOT FOUND INSERT username, password, e-mail,
 fname, mi, lname, age, gender INTO Database START Session STORE
 username AS Session Data[username] SET Session Data[tempScore] to 0
 SET Session Data[topicID] to ‘ a1’ LOAD Subject Page ELSE PRINT “
 Username already exists! ” RELOAD Registration Page ENDIF START Session
 GET selectedSubject ESTABLISH Link to Host ESTABLISH Connection to
 Database SEARCH topicID of selectedSubject FROM Database STORE topicID
 as Session Data[topicID] SET Session Data[questID] to questID Load Play
 Now Page

START Session ESTABLISH Link to Host ESTABLISH Connection to Database
 GET Session Data[topicID] SET Session Data[questID] to questID START
 Session DO INITIALIZE counter to 1 ESTABLISH Link to Host ESTABLISH
 Connection to Database GET Session Data[topicID] AS ID GET 4th character
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 system-assignment/](https://assignbuster.com/sample-documentation-for-web-based-gaming-system-assignment/)

of Session Data[questID] as level GET questID FROM Database AS Array[]
WHERE (1st AND 2nd character)= ID AND (4th character) = level WHILE
counter is less than 11 RANDOM SELECT questID CHECK questID if already
used for that specific user IF NOT used PRINT question corresponding to the
questID PRINT choices corresponding to the questID

IF a choice is selected CALL INCREMENT counter by 1 ENDIF ENDIF END
WHILE SET Session Data[level] = SET Session Data[level] + 1 WHILE Session
Data[level] is less than 6 START Session INITIALIZE flag to 0 ESTABLISH Link
to Host ESTABLISH Connection to Database GET selectedChoice SEARCH
Session Data[questID] IF FOUND GET answer COMPARE selectedChoice and
answer IF MATCH GET 4th character of Session Data[questID] AS level DO IF
level = Session Data[prevLevel] IF level= 1 Session Data[tempScore]=
Session Data[tempScore]+10 STORE 1 to Session Data[prevLevel] ELSE IF
level= 2 Session Data[tempScore]= Session Data[tempScore]+20

STORE 2 to Session Data[prevLevel] ELSE IF level= 3 Session
Data[tempScore]= Session Data[tempScore]+30 STORE 3 to Session
Data[prevLevel] ELSE IF level= 4 Session Data[tempScore]= Session
Data[tempScore]+40 STORE 4 to Session Data[prevLevel] ELSE Session
Data[tempScore]= Session Data[tempScore]+50 STORE 5 to Session
Data[prevLevel] ENDIF ELSE SEARCH Session Data[username] IN Database
SET score to (score + Session Data[tempScore]) Session Data[tempScore] =
0 SET Session Data[prevLevel] = level SET flag to 1 ENDIF WHILE flag is
equal to 1 ENDIF ENDIF START Session ESTABLISH Link to Host ESTABLISH
Connection to Database

SEARCH Session Data[username] IF FOUND DELETE FROM Database
DESTROY Session ENDIF START Session ESTABLISH Link to Host ESTABLISH
Connection to Database SEARCH Session Data[username] IF FOUND UPDATE
password, email, gender, age, address, school, fname, lname, mi INTO
Database LOAD Profile Page ENDIF START Session DESTROY Session LOAD
Main Page 5. 0 BEHAVIORAL MODEL AND DESCRIPTION 5. 1 STATE
TRANSITION DIAGRAMS MAIN MODULE LOGGING IN MODULE SIGNING UP
MODULE SELECTING TOPIC MODULE PLAYING MODULE CHECKING MODULE
VIEWING MODULE UPDATE PROFILE MODULE DELETE PROFILE MODULE
LOGGING-OUT MODULE 5. 2 CONTROL SPECIFICATION (CSPEC)

LOG-IN Correct UsernameIncorrect Username Correct PasswordLogged-
inAccess Denied Incorrect passwordAccess DeniedAccess Denied The user
can only be logged-in and be verified by the system as a registered user
when both username and password entered matched. Otherwise, access is
denied. SIGN-UP Available usernameUnavailable username Completely filled
out fieldsRegistration acceptedRegistration denied Incompletely filled out
fieldsRegistration deniedRegistration denied The user can only be signed-up
in the system if the username chosen is still available and has also filled out
all fields provided.

Otherwise, registration is denied. SOFTWARE REQUIREMENTS SPECIFICATION

1. 0 INTRODUCTION 1. 1 GOALS AND OBJECTIVES The software aims to:

- Provide a Graphical User Interface suitable to the preferences of a grade six pupil.
- Software that can be accessed through the World Wide Web.
- To provide a mechanism to generate questions and check the chosen answers.

•To support personal accounts for grade six pupils. 1. 2 STATEMENT OF
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SCOPE The VAWIKI Online Brain Teaser software accepts personal information of its users during registration and editing of profile.

It also accepts the chosen answer of the user for each question generated. The software checks whether the answer chosen is correct for that specific question or not. A topic can be chosen by the user from the given links on the subject page which determines the subject matter of the questions to be generated randomly. The score is determined for each correct answer with respect to the unit value of a correct answer per level and is reflected in the profile page. The user logs-in by inputting his distinct username and password, and logs-out by clicking on the log-out link.

The user may choose to view Help and About Us for more information. A database is used to support storage of data. 1. 3 SOFTWARE CONTEXT The proposed software is conducted in a more convenient way. The user registers or logs in to the system as a pre-requisite to play games in the system. When the user is verified as a member to the system, he/she then chooses to play or choose a desired subject first before playing. In playing the game, the system generates randomly a question according to its subject & level. The user then answers the question by clicking to one of the four choices given to be submitted and verified.

After answering all questions for that certain level the user is assessed with its score. If he passed (7 correct answers out of 10), he will be through to the next level until he completes all the subjects that the system can offers. The session can be ended by clicking the log-out item in the menu. 1. 4 MAJOR CONSTRAINTS The following are the major constraints of the proposed

system: •The user is not a grade six level. •The gaming system does not cover all possible subject matters from the user's previous lessons. •Images loads slowly when the software is used in a slow processing computer unit.

The software has no control over the webhost. (Ex. Webhost encounters problems and executes maintenance making the software unavailable temporarily on the internet.)

2. 0 DATA DESIGN These are the variables used

in implementing the VAWIKI Online Brain Teaser: \$_COOKIE[' logged']-

determines whether somebody was logged in \$_COOKIE[' username']-stores

username of the logged in user \$_COOKIE[' quest']-stores the question

\$_COOKIE[" countQuest"]-question counter; maximum limit is 10

\$_COOKIE[♦[' countCorrect']ounter for correct answers; maximum limit is 10

\$_COOKIE[♦[' topicID']tores the topic ID _COOKIE[♦[' level']tores the level

\$_COOKIE[♦[' topic']tores the topic description milisec-time in milliseconds

seconds-time in seconds \$link-the virtual link of the system to its web host

\$query-a query to the database \$result-the result to a query \$rows-an array

of distinct rows retrieved from the result set \$name-the complete name of

the user (first name, middle initial, last name) \$age-the age of the user

\$gender-the gender of the user (M/F) \$add-address of the user \$school-the

name of the school where the user studies \$email-the valid e-mail address of

the user levelScore-the accumulated score of the user for that particular

level \$count-general counter \$num-number of rows \$pwd-original password

\$pwd1-new password \$pwd2-confirmation to the new password (must be

identical to \$pwd1) 3. 0 SEQUENCE DIAGRAM 4. 0 ARCHITECTURAL AND

COMPONENT-LEVEL DESIGN 4. 1 PROGRAM STRUCTURE (PROGRAM

FLOWCHART) 5. 0 USER INTERFACE DIAGRAM 5. 1 DESCRIPTION OF THE

USER INTERFACE 5. 1. 1 SCREEN IMAGES Play now! Profile Delete Subjects

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Correct Answer Wrong Answer Show Score Link Show Score Retry Level Edit

Personal Info Security Question 5. 1. 2 Objects and actions

About-Us Help Home Account Successfully Deleted Log-out Successful 5.

2INTERFACE DESIGN RULES The interface of the system was designed in accordance with its target users' preferred environment. Since the target users are grade six pupils and studies have shown that within their projected age range are into recreational activities, a playful interface motif has been applied. The pages' background color was set into white because it generally soothes the eyes of the user especially that texts and graphics are used in paramount for this system. Choosing dark colors (e. g. lack, maroon, and brown) for background would eventually disturb a user especially on answering the generated questions of the game; that is why a lighter color was selected to provide serenity and presence of mind to the player/user. Also, by applying white color as background, the vivid colors of the frames within the web pages and colorful graphics used will be emphasized. The buttons used were standard so that the users will not be surprised in terms of its functionality. Common words were used as values for these buttons for better understanding, considering the amount of vocabulary grade six students would have.

Cartoons and easy breezy graphics were used to put an edge on the system design. The more cartoons it has, the playful the environment would be. However, the design for the system does not crowd each page with such elements. The layout of each page follows the standard lay-outing technique and that is to lead the users' eye through the design. (e. g. The main page follows the zigzag layout.) The most important thing is that the words used

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for each portion of the web pages of the VAWIKI Online Brain Teaser are concise and understandable to the level of knowledge of grade six pupils. 5.

3COMPONENTS AVAILABLE

CHECKING OF ANSWER It shows a queen check mark with “ CORRECT” word to signify a correct answer and a red cross mark with “ WRONG” word to signify otherwise. A next button is provided for the user to click when he/she feels like answering the next question. A “ Show Score” link is provided instead of the next button when the user has answered completely the 10 questions, correctly or not. **SHOW SCORE** Shows the accumulated score, current level completed and the topic taken. A “ Next Level” button is provided for the user to click when he passed the last level taken and a “ Retry Level” button otherwise. **SUBJECT SELECTION**

It is composed of several clickable links for several topics belonging to their respective subjects. Animated graphics are placed near the subjects (Math, English, Science, HEKASI, Arts) to provide supplementary information.

PROFILE Shows the basic personal information of the user such as name, age, address, school, and gender as well as his progress (topics taken, current level for each topic taken and accumulated score for each topic taken). It also shows his username and e-mail address. An “ Edit Profile Info.” link is provided such that the user clicks it when he/she wanted to change his/her personal information.

A “ Delete Account” link is provided for the user to click it when he/she wanted to delete his/her account and chooses not to have any connection to the system anymore. However, a pop-up window will occur if the user

doesn't set yet a security question and answer when he/she clicks on the "Delete Account" link. Edit Profile Shows the data fields and drop-down lists with default values set as determined through the user data stored when the user registers first for membership. Six more fields are added: school, address, and new password, confirmation of new password, security question and answer to the security question.

An "Update" button is provided for the user to click when he/she wants to update his/her profile with new set of values for the selected fields. A "Restore" button is provided to restore user information and a "Cancel" button to cancel editing of user profile. Main Menu The main menu is the backbone of all links of the VAWIKI Online Brain Teaser. It is placed in all web pages of the system. It is specifically composed of clickable text which links to major software functions: Membership, Log-in, and Lay-out, Play NOW, Subjects, Profile, About us and Help.

This graphical user interface allows the users to navigate throughout the system. Membership The Membership GUI is composed of text fields for the user to input texts and drop-down lists for item selection: characters and bulky date are required for just one data field to justify security of user information, characters inputted in password fields are replaced with asterisks. A "Submit" button is provided when the user sends his/her personal information to the system and a "Reset" button is provided if the user wants to clear out the text fields and select default values of drop-down lists.

LOG-IN The Log-in GUI basically has four major components. The first two are the username and password fields where the user types his/her distinct combination of user ID and security code. Then, a “ Log-in” button is provided such that the user may click it when he/she wants to log-in. The last one is the “ Register Link” which redirects the user to the Membership page when clicked. **PLAY-NOW** In Play-NOW, the current topic, current level, number of correct answers over the actual numbers of questions answered, the current question and its corresponding choices are reflected.

Radio buttons are designated for each choice. Its default value is the first choice on the list. A “ Final Answer” button is provided when the user is about to submit his final answer for that particular question and redirects him to the Checking of Answer page. **Delete Account** In Delete Account, a “ Delete Account” button is provided giving the user authority in managing or deleting his account. Only the user can delete his/her for he/she required to fill the Security Question details in order to successfully delete his/her account. **6. RESTRICTIONS, LIMITATIONS, AND CONSTRAINTS** The VAWIKI Online Brain Teaser is a functional Web application that is ideal for Grade 6 students only. It gathers all the lessons learned from school and presents it in a quiz-like manner, testing the mental capacity of the students. However, certain enhancements are recommended in order to aid the students in the game. An email confirmation is highly recommended during registration. This would strengthen the application in terms of its security and would also prevent fraudulent users from gaining access to the game.

In the Profile’s page, it is also recommended to have a summary of all the questions answered by the user. This would remind him of the questions he

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has taken with its corresponding correct answers. Upon completion of all the levels, an animated image of a trophy is recommended to be displayed both during the game and in the Profile's page of the student. This would serve as a reward to the student for a job well done. Lastly, it is also recommended to have this game expanded, catering to a much bigger audience. This would entail that only Grade 6 students are allowed to play the game.