Memory

1. Introduction Do you remember what you had for lunch this afternoon at McDonald? The number of jersey that you worn last basketball match? Or what happened on 11th September 2001? Of course you do. But how we travel back in time easily? This is because of our MEMORY. A flow of events must occur before we can say “ I remember". Memory is “ an active system that receives, stores, organizes, alters and recovers information" (Lieberman, 2004). In general, memory acts like a computer. Incoming information will be encoded, it is like typing data into a computer. Next, stored the information that we typed into the system. Finally, memories must be retrieved in order to be useful. According to Parente and Stapleton (1993), they stated that “ memory is a mental process of storage and retrieval of information and experience. Information makes its way into your memory through your senses. It is then processed by multiple systems throughout your brain and stored later use. " For memory to properly function, information must be correctly received through the senses. Memory is stored (encoded) according to many different themes. It is stored according to time (when something happened), category (animal, plant, mineral), function (keyboard is use for typing), and the like. There are 3 stages of memory, which are Sensory Memory, Short-term Memory, and Long-term Memory. Sensory Memory is the first stage of memory, which holds an exact record of incoming information for a few seconds or less. It forms automatically, without attention or interpretation. Attention is needed to transfer information to working memory. Its function is to holds information long enough to be processed for basic physical characteristics. Its capacity Is large and can hold many items at once. The duration is very brief retention of images, visual info is 0. 3 seconds and auditory info is 2 seconds. Short-term Memory is the

memory system used to hold small amounts of information for relatively brief time periods. The capacity can hold a small amount of information in mind in an active, readily available state for a short period of time. The duration is believed to be in the order of seconds. Estimated capacity varies from about 4 to 9 items, depending upon the experimental design used to estimate capacity. Short-term Memory is often used for more than just storing information. When it is combined with other mental process, it provides an area of working memory where we do much of our thinking. Working memory acts as a sort of “ mental scratchpad". According to Holmes and Adams (2006), they says that “ working memory is briefly holds the information we need when we are thinking and solving problem. " Baddeley (2003) stated that “ whenever you do mental arithmetic, put together a puzzle, plan a meal, follow directions, or read a book, you are using working memory. " Once information passes from sensory memory to working memory, it can be encoded into long-term memory. Long-term Memory is the memory system used for relatively permanent storage of meaningful information. The encoding process controls movement form working memory to long-term memory storage. The retrieval process controls flow of information from long-term to working memory store. The function of long-term memory is to organize and stores information, more passive form of storage than working memory. It has unlimited capacity and the duration is permanent. There are two dimensions of Long-term Memory, which are Explicit Memory and Implicit Memory. Explicit memory is memory that with awareness, information can be consciously recollected, also called declarative memory. There are two types of explicit memory, which is episodic information and semantic information. Episodic information is

information that about events or “ episodes". Semantic Memory is information that about facts, general knowledge, school work and so forth. Implicit Memory is memory that without awareness, it affects behavior but cannot consciously be recalled, also called non-declarative memory. It has three subtypes, which are classical conditioning, procedural memory, and priming. Classical conditioning is the memory has been studied earlier and automatically retrieved. Procedural memory is memory that enables you to perform specific learned skills or habitual responses, such as riding a bike. Priming is influence of one memory on another, it does not depend on awareness and is automatic. For instance, I cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg. According to the research at Cambridge University, it doesn’t matter in what order the letters in a word are, the only important thing is that the first and last letters be in the right place. The rest can be a total mess and you can still read it without a problem. This is because of the priming. Why so different between human memory and animal memory? A plenty of research stated that human being possess a capability far beyond animals. In order to know the truth, we started doing this report to find out the research about human memory and animal memory and do comparison.