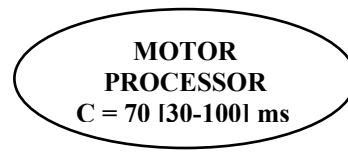
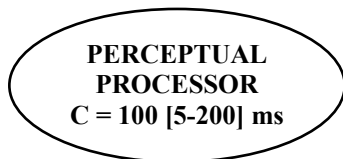
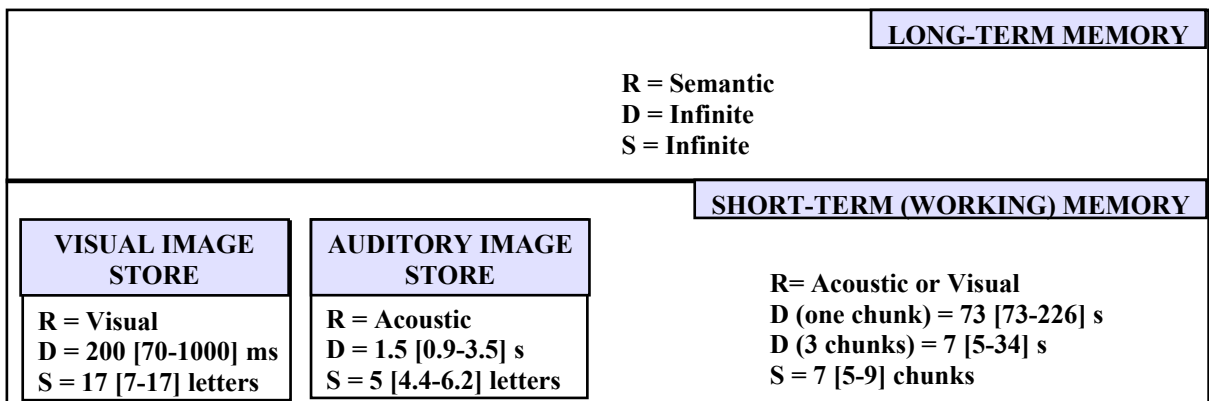


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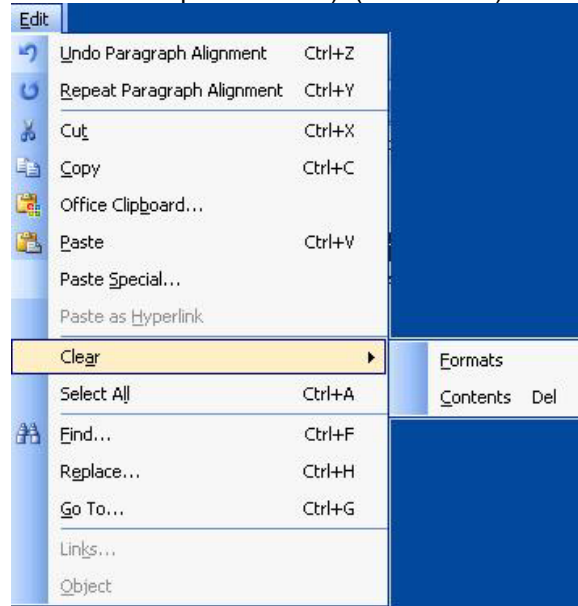
CMPE 131/231, PSYCH 131/223: MID TERM EXAM
WINTER 2008 – FEBR 12, 2008
Total mark: 100%, 1hr 45 min

1. A British man invented a device called the Mosquito, which emits a very high frequency tone that people without presbycusis (i.e. the teenagers) would get annoyed and would not hang out and litter in his area. Some teenagers decided to convert the same technology into a ring tone that only they could hear so that they can communicate in classes without their professors hearing the ring tone. This is an example of two systems that are based on the same technology, in which one system benefits a group with a specific condition and the other benefits the group without that specific condition. Describe two systems (based on the same technology/principle) in which one system benefits a group with a specific disability and the other benefits a group without that specific disability. (Worth 10%)

2. Below are two scenarios in which the secondary information failed to get noticed:
 - Scenario A: While you were talking on your home phone, there was a one second beep indicating that there was another call waiting. You did not notice somebody else was calling until you talked to that second caller the next day.
 - Scenario B: You were browsing on safeway.com to buy some salad ingredients. There was a one second flashing advertisement of the newest salad dressing from Heinz. You did not notice there was this advertisement until your mate, who was looking over your shoulder while you shopped, told you a few hours later.
 - a. In both scenarios, one piece of information did not get noticed. Explain, using the Model of Human Processor, the differences between Scenario A and Scenario B, highlighting why these two pieces of information did not get noticed (the MHP components are provided below). Draw arrows to explain where the information flows and gets lost if appropriate. (Worth 10%)
 - b. How would you change the presentations of the information in Scenario A and Scenario B to make them more likely to get noticed but without necessitating users to stop the main activity (use **solely** MHP as the basis of argument)? (Worth 15%)



3. Identify **four** ways in which the following menu helps learnability (ease with which new users can begin effective interaction and achieve maximal performance). (Worth 15%)



4. Below is a scenario of calling a number through directory assistance using a cell phone.

- Saul needs to call a person on his cell phone. Saul does not know his number, only the fact that his name is John Smith and he lives in Santa Cruz.
 - He calls the directory assistance. Joan, the operator asks for the name of the person and the city he lives. Saul gives the name and the city.
 - Joan looks up her database and finds 2 John Smiths in Santa Cruz. She asks for an address (by law, she is not allowed to disclose those addresses to a customer). Saul does not know John's address, so he asks for both numbers.
 - Joan says that it will cost Saul \$1 (it's 50 cents per number for this directory assistance), and it cannot be charged to the cell phone, Saul has to give her his credit or debit card details.
 - Saul is very worried about their conversation being intercepted by bad people, so he says that he will give his credit card number and expiration date over the phone, but will text Joan his name, billing address and the 3-digit verification code.
 - Joan agrees to this idea. She notes down and repeats the details that John gives over the phone. She then gives Saul a number to text. When Saul texts her the remaining details, Joan verifies that the payment goes through, and then texts Saul the two numbers.
- a. Draw a hierarchical task diagram (remember to include plans) for the above scenario. (Worth 20%)
 - b. Create use cases with as many extensions/alternative courses as necessary for the above scenario. I expect at least 2 – with Saul and Joan as the actors (Worth 15%)
 - c. If you are going to implement this system as a Web-based system, where all of the voice conversations are replaced with menu-based interactions, and instead of sending a text Saul will need to send an email, draw a storyboard of the user interface. For your convenience, the initial screen is provided below. (Worth 15%)

Directory Assistance

Last name:

First name:

State: ▼

City: