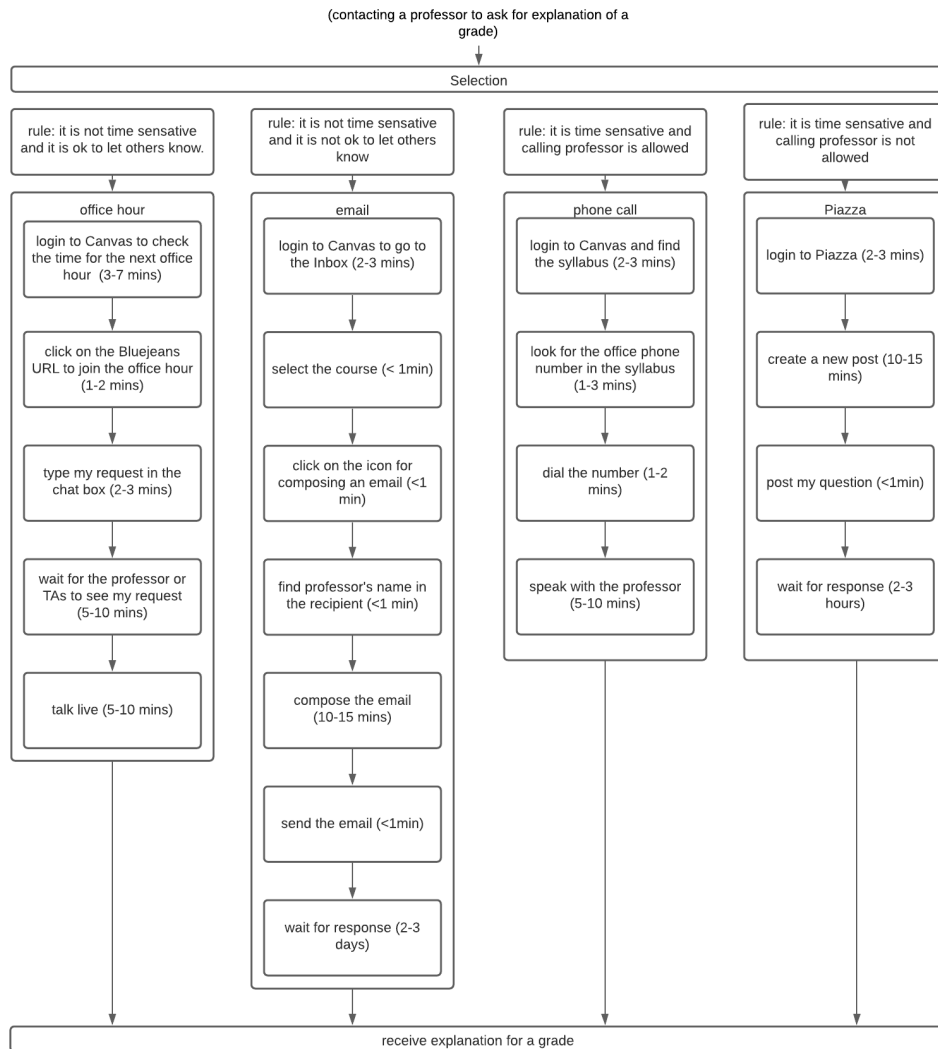


# CS6750 Assignment P4

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## 1 QUESTION 1



## 2 QUESTION 2

Complete an assignment

1. Access the home page of Canvas
  - 1.1. Enter Canvas URL in browser
  - 1.2. Login to Canvas
    - 1.2.1. Enter GT Account and Password
    - 1.2.2. Click on Login
    - 1.2.3. Perform two-factor login
      - 1.2.3.1. Click on "Send Me a Push"
      - 1.2.3.2. Receive Login request from Duo App on my phone
      - 1.2.3.3. Tap the "Approve" button
2. Access the relevant course page of Canvas
  - 2.1. Click on the "Courses" in the left navigation menu
  - 2.2. Choose the course "CS6750" on the menu
3. Navigate to the assignment page that provides submission option
  - 3.1. Click on "Assignments" in the left 2<sup>nd</sup> layer navigation menu
  - 3.2. Wait for the page to show a list of the assignments
  - 3.2. Select the intended assignment
4. Complete the submission of the assignment
  - 4.1. Click on the "Submit Assignment" button on the top right
  - 4.2. Wait for a new dialogue box to show in the lower part of the same page
  - 4.3. Click on the "Choose File" button in the dialogue box
  - 4.4. Wait for a new window to show the files on my local drive
  - 4.5. Navigate to the assignment file location on my local drive
  - 4.6. Select the assignment PDF file
  - 4.7. Click on the "Choose" button
  - 4.8. Wait for the file to finish uploading
  - 4.9. Click on the "Submit Assignment" button

### 3 QUESTION 3

#### 3.1 Distributed cognition of navigation with a map and a passenger

The system has the driver and passenger who are responsible for perceiving, reasoning, and acting over things, while the map forms the system long term memory for roads and streets to the destination.

##### 3.1.1 *Driver*

The driver's cognitive load is very high. The driver needs to keep an eye on the other cars around, red lights, pedestrian, and road signs such as stop sign and speed limit. The driver also keeps track of his/her own speed and make predictions of the traffic patterns based on the observations of the traffic around, and also make sure the car has enough gas. The driver's cognitive load is distributed over the speed meter, gas meter, steering wheel, speed pedal, and brake. Meanwhile, the driver receives the navigation commands, reminders, or warnings from the passenger, and identifies the appropriate actions in response to these messages, and executes the actions. The driver can also provide feedback to the passenger's commands in terms of the accuracy of the navigation based on the driver's experience.

##### 3.1.2 *Passenger*

The passenger (wife/husband) is offloading the navigation task from the driver. The navigation task includes perceiving the current location, making sure the car is following the route, and providing the commands to the driver within the appropriate time frame. The driver needs time to take action such as slowing down to exit the freeway or make turns. The passenger also reminds the driver of the next action in advance in case the driver forgets. The passenger can also provide warnings for things that the driver is not aware of such as blind spots when switching lanes. Also, the passenger is responsible for keeping the driver hydrated and awake.

##### 3.1.3 *Map*

The map serves as a long term memory that stores the roads and locations with which the passenger figures out the route to the destination.

### **3.2 Navigation using a GPS**

A GPS can offload the navigation task from the driver very easily. It includes comprehensive map data and traffic data. The built-in algorithm calculates the time and distance to provide different routes (optimal route by default) to the driver. It provides real-time commands to assist the driver in the navigation. The GPS also provides real-time traffic so that the driver can slow down in advance if there is heavy traffic ahead, and road speed limit to make sure the driver does not break the law.

Even though the GPS provides more accurate navigation than a passenger, the GPS cannot warn the driver about the car in the blind spot, and about the pedestrian on the street if the driver gets distracted either. The GPS definitely cannot provide water to the driver or have conversations with the driver. These are the advantages of having a passenger on the side from a social cognition perspective. Therefore, the social relationship between the driver and the passenger is important for the driver to have safe and pleasant driving experience.

## **4 QUESTION 4**

The Outlook calendar is an extension of my long-term memory. It has all the meetings that I need to attend every day and sends me a reminder of the meeting 15 and 30 mins in advance. It is also a platform where users including me can check other users' schedules and choose the meeting time that works for everyone. Outlook calendar visualizes users' schedule with space bars with different colors and blank means availability. It also provides wording feedback such as "2 conflicts" if I select a time where two attendees are occupied.

### **4.1 Memory Offload**

Outlook calendar works as a long-term memory to store the meeting time, meeting duration, meeting attendees as well as the response tracking of each attendee. I don't need to manually remember my meetings for the next day. When I want to know tomorrow's schedule, I just open the calendar on my cell phone and check my schedule. I can also know who attends and who does not attend from the tracking list where the green tick mark means meeting invite is accepted by the attendee while red x means the invite is declined. I can also store my personal

appointment in the Outlook calendar, and I can make the meeting or appointment reoccurring with the frequency at the user's choice.

#### **4.2 Performing Actions**

The Outlook calendar sends me reminders 30 mins and 15 mins before the meeting and also a final reminder at the meeting time. The reminder window will not be closed until the user manually dismisses it or closes it.

#### **4.3 Perception Offload**

The visualization of people's schedules is very useful when I am trying to find a good meeting time for all attendees, especially for a large group. The blue space bar tells me the time is blocked, and the red bar tells me the person is out of the office during that time. The representation of the interface is straightforward. I don't have to manually check with each person about their availability.