Project Report

Deadline: Tuesday 08/11/2022 @ 23:59

**[Total Mark for Project is 14]**

***Human Computer Interaction***

***IT352***

**Instructions:**

* You must submit two separate copies **(one Word file and one PDF file)** using the Assignment Template on Blackboard via the allocated folder. These files **must not be in compressed format**.
* It is your responsibility to check and make sure that you have uploaded both the correct files.
* Zero mark will be given if you try to bypass the SafeAssign (e.g. misspell words, remove spaces between words, hide characters, use different character sets, convert text into image or languages other than English or any kind of manipulation).
* Email submission will not be accepted.
* You are advised to make your work clear and well-presented. This includes filling your information on the cover page.
* You must use this template, failing which will result in zero mark.
* You MUST show all your work, and text must not be converted into an image, unless specified otherwise by the question.
* Late submission will result in ZERO mark.
* The work should be your own, copying from students or other resources will result in ZERO mark.
* Use **Times New Roman** font for all your answers.

Student Details: CRN:

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| --- | --- | --- |
|  |  |  |
| **Name:**  **Name:**  **Name:** |  | **ID:**  **ID:**  **ID:** |
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# Description and Instructions

**Project Description:**

This project is an opportunity for you to practice your knowledge and skills to analyze different interfaces for websites that you explore followed by the design implications of the cognitive processes. Moreover, it will allow you to develop skills of working in teams.

* **Total Marks = 14**

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| **Project Report** | **Presentation** |
| 10 marks | 4 marks |

* Group Size = 2- 4 members.
* One group member (group leader) should **submit all files:** **Project Report** and **Presentation Slides** on blackboard. Marks will be given based on your submission and quality of the contents.

**Project Report**

* Each Project Report will be evaluated according to the marking criteria mentioned in each question section.

**Presentation**

Grading Criteria:

|  |  |
| --- | --- |
| Complete content (Introduction, body, and conclusion) | 2 mark |
| Effective use of time (max. 8-10 mints) | 1 mark |
| Voice projection and loudness/ Eye contact/ Confidence and attitude | 1 mark |

# Question One

*Learning Outcome(s):*

Explain cognitive, social, and emotional aspects of different types of user interfaces

*Demonstrate data gathering, analysis, and presentation techniques for discovering user interface requirements*

***4 Marks***

1. Select any three websites of your choice and enlist five good and five bad features of all the websites. (2.5 Marks)

<https://seu.edu.sa/>

Good:

1. Well-chosen colors (Consistent colors through the website).
2. Search bar that assists finding features.
3. Web support (Chat) that offers the necessary information.
4. Offering two languages (Arabis/English)
5. Secured website (Safe to use) through SSL certificate.
6. Effective to use through a count of helpful features.

Bad:

1. Using design template with malfunctioning navigation bar.
2. The design isn’t stable on smart phones.
3. Not offering accessibility options.
4. Takes considerable amount of time to load.
5. Some icons conflict with the background (Unreadable/Unrecognizable)
6. Some external links are unstable.
7. Some icons are confusing and would need experience for the user to understand it’s function.

<https://aast.edu/>

Good:

1. Well-chosen colors (Matches the organization identity).
2. Search bar that assists finding features.
3. Web support (Chat) that offers the necessary information.
4. Secured website (Safe to use) through SSL certificate.
5. Effective to use through a count of helpful features.
6. Offering two languages (Arabis/English)
7. Offers accessibility options.
8. Very high learnability through following design rules.

Bad:

1. Home page is considerably long.
2. Website takes time to load.
3. Not stable on mobile phone version.
4. Some icons conflict with the background leading to unreadable text.
5. Placement of some icons conflict with the background.

<https://www.alfaromeo.com/>

Good:

1. Well-chosen colors (Matches the organization identity).
2. Very simple and visible design.
3. Secured website (Safe to use) through SSL certificate.
4. Very high learnability through following design rules.
5. Very stable mobile design.
6. Effective to use through a count of helpful features.

Bad:

1. Considerable time to load.
2. Doesn’t recognize region automatically.
3. No search bar feature.
4. No chat support provided.
5. No Accessibility options.

1. Evaluate and discuss your selected website ranking based on usability, accessibility, and User experience (UX) criteria. (1.5 Marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **SEU** | **AAST** | **ALFA ROMEO** |
| Usability | Learnability | Yes | Yes | Yes |
| Memorability | Yes | Yes | Yes |
| Safe to use | Yes | Yes | Yes |
| Effective to use | Yes | Yes | Yes |
| Entertaining | Yes | Yes | Yes |
| User Experience | Satisfying | No | Yes | Yes |
| Motivating | No | No | Yes |
| Engaging | No | No | Yes |
| Enjoyable | No | No | Yes |
| Entertaining | No | No | Yes |
| Accessibility | Hearing | No | Yes | No |
| Vision | No | Yes | No |
| Captions | No | Yes | No |
| Alternative text | No | Yes | No |
| Screen reading compatibility | No | Yes | No |

Ranking:

1. Alfa Romeo
2. AAST
3. SEU

# Question Two

***1 Marks***

*Learning Outcome(s):*

*Describe and apply various interaction evaluation techniques*

Summarize the different aspects of the website that you selected and suggestion(s) for improvements. (Maximum 250 words)

With regard to the first site of the Saudi Electronic University, it is an informational site that aims to spread awareness and knowledge about the university and the services it provides, as well as the disciplines, but the site was not designed from the ground up.

It lacks craftsmanship in the design and needs many tests in order to rise to the level of other sites in comparison

With regard to the Arab Open Academy website, it needs to review the designs and colors, especially in the new publications that are added periodically so that their colors do not conflict with the colors on the site.

As for the Alfa Romeo website, it needs to add access features, which is the same as the first website of the Saudi Electronic University

On the security side, all the sites have successfully passed this feature. The comparison site is committed to using the latest methods of encryption and electronic protection.

As for the user's ability to remember using the site, all sites have achieved success in this matter, except for the Saudi Electronic University site, which is somewhat unclear, especially due to the problem of the navigation bar.

# Question Three

***5 Marks***

*Learning Outcome(s):*

*Illustrate prototyping for interaction design and explain practical facets of interface construction*

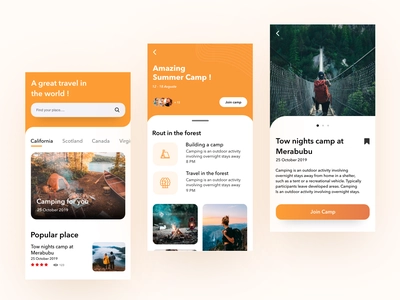
1. Design three interfaces for any application or website that you propose by following the design implications for the cognitive processes. (3 marks)

Graphical user interface, application

Description automatically generated Graphical user interface, application

Description automatically generated Graphical user interface, application

Description automatically generated



1. Explain what are the design implications that you follow in each interface. (2 marks)

|  |  |
| --- | --- |
| **Cognition** | **Design implications** |
| Attention | •• Consider context. Make information salient when it requires attention at a given stage of a task.  •• Use techniques to achieve this when designing visual interfaces, such as animated graphics, color, underlining, ordering of items, sequencing of different information, and spacing of items.  •• Avoid cluttering visual interfaces with too much information. This applies especially to the use of color and graphics: It is tempting to use lots of these attributes, which results in a mishmash of media that is distracting and annoying rather than helping the user attend to relevant information.  •• Consider designing different ways of supporting effective switching and returning to a particular interface. This could be done subtly, such as the use of pulsing lights gradually getting brighter, or abruptly, such as the use of alerting sounds or voice. How much competing visual information or ambient sound is present also needs to be considered. |
| Perception | Representations of information need to be designed to be perceptible and recognizable across different media.  •• Design icons and other graphical representations so that users can readily distinguish between them.  •• Obvious separators and white space are effective visual methods for grouping information that make it easier to perceive and locate items.  •• Design audio sounds to be readily distinguishable from one another so that users can perceive how they differ and remember what each one represents.  •• Research proper color contrast techniques when designing an interface, especially when choosing a color for text so that it stands out from the background. For example, it is okay to use yellow text on a black or blue background, but not on a white or green background.  •• Haptic feedback should be used judiciously. The kinds of haptics used should be easily distinguishable so that, for example, the sensation of squeezing is represented in a tactile form that is different from the sensation of pushing. Overuse of haptics can cause confusion. Apple iOS suggests providing haptic feedback in response to user-initiated actions, such as when the action of unlocking a vehicle using a smartwatch has been completed. |
| Memory | Reduce cognitive load by avoiding long and complicated procedures for carrying out tasks.  •• Design interfaces that promote recognition rather than recall by using familiar interaction patterns, menus, icons, and consistently placed objects.  •• Provide users with a variety of ways of labeling digital information (for example files, emails, and images) to help them easily identify it again through the use of folders, categories, color, tagging, time stamping, and icons. |
| Learning | •• Design interfaces that encourage exploration.  •• Design interfaces that constrain and guide users to select appropriate actions when initially learning. |
| Reading, Speaking, and Listening | •• Keep the length of speech-based menus and instructions to a minimum. Research has shown that people find it hard to follow spoken menus with more than three or four options. Likewise, they are bad at remembering sets of instructions and directions that have more than a few parts.  •• Accentuate the intonation of artificially generated speech voices, as they are harder to understand than human voices.  •• Provide opportunities for making text large on a screen, without affecting the formatting, for people who find it hard to read small text. |
| Problem-Solving, Planning, Reasoning, and Decision-Making | •• Provide information and help pages that are easy to access for people who want to understand more about how to carry out an activity more effectively (for example, web searching).  •• Use simple and memorable functions to support rapid decision-making and planning. Enable users to set or save their own criteria or preferences |