

CURTIN UNIVERSITY
School of Electrical Engineering, Computing, and Mathematical Sciences
Computing Discipline
Human Computer Interfaces
Assignment 1, Semester 1, 2020

Overview

Design a suitable interface for a program of your choice. You must choose a program that you are allowed to modify under copyright laws.

Aims

Your team is to design a user interaction for the system that you have chosen. The system interface must be sufficiently complex allowing you to demonstrate the knowledge required for ICTE3002/5001 HCI.

Your team should meet during the 2nd teaching week to choose the name of your team and the program you will work on. **Once this has been chosen, you must email your professional written proposal to the company manager (lecturer/tutor) for approval by 5 PM, Friday 13 March 2020.** Your proposal should be up to 2 pages, written in a formal and professional manner including sufficient details to allow the company manager to decide if the project is viable. Contents should include (but not limited to): Why do you choose this program? What is wrong with the current interface? How many screens/windows do you plan to develop etc. Note: You cannot choose a project that has already been completed by this company (previous students in the last 4 years). The list of programs NOT allowed to be chosen is attached in Appendix 1. **Approval is mandatory.** You can choose to develop your own program, but remember it has to be sufficiently complex. The project manager in each group is responsible to submit the proposal to the lecturer/tutor to seek approval for the choice of group name and program.

You must follow good user centric design and usability principles as discussed in the lectures and the text book “Helen Sharp, Yvonne Rogers & Jenny Preece: Interaction Design: Beyond Human–Computer Interaction, 4th/5th Ed.”

Whilst there is no requirement to implement a fully functioning system, additional bonus marks may be awarded for this (minor functionalities will not get the bonus marks). The minimum requirement is to show (with some computer based graphical representation) what will happen when the rest of the system becomes available.

Assignment Teams

You have been placed into teams. Each team member will have one or more specific roles. You are free to choose the roles, however it is suggested these be:

Project Manager (Compulsory)
Graphic Designer
Psychologist
Data Analyst
Usability Engineer
Document controller
etc.

Although you each have a specific role, you can choose to work together on any specific aspect of the project. The Project Manager is responsible for the smooth running of the project, but this role should not be dictatorial. This position is responsible for communication with management (Lecturer/tutor). This includes but not limited to arranging for meetings, presenting reports by uploading them through Blackboard, etc.

Not all “roles” will be required at all times, thus it will be necessary for the people in idle roles to assist others as directed by the project manager. You will need to research your role to ascertain the duties involved.

Everybody will act as a programmer to implement a prototype once your design passes the first round of approval.

Assignment Tasks

You are required to follow the design process discussed in the lectures and the book. Choose a lifecycle model that your group can use.

The lecturer will act as both the Manager of your software company, and as the client for the system. The tutor can also act as your client. Other staff members can be invited to act as clients from time to time. The clients will require a number of non-functioning design prototypes in the first round. The clients can reject the design in this round and ask for alternatives. There will be one client meeting for every group on week 7 OR 8. The timeslot reservation is based on “first come first served” when the schedule is available. Remember, only project manager can contact the lecturer.

After the first round of approval, each member of the team is required to create a fully functional interface using Java NetBeans IDE. Usually the implementations do not provide the full function of the real interface which are completely bound with the real program behind. Up to 10% bonus point will be awarded if a fully functional interface is produced. The actual bonus point awarded is based on the complexity of the implemented GUI.

The final prototypes will be passed to the client via the manager of your software company, so the prototypes must be accompanied by a full, professional report detailing all design choices and decisions. Your team is required to document the design process from start to finish, including all decisions made, hurdles to overcome and milestones set and reached (minutes of all meetings should be included as an appendix). The report must be professionally written – i.e. as if your job depends on it! The report is the main part of the document, which means it should be the first thing the client sees. All other aspects should be attached as appendices,

and referenced throughout the report. Each member is responsible to write their own design and implementation. For the parts that's done by the whole team, **it needs to be clearly labelled in the report which team member has written which part. (with student ID)**

Submission and due date

A demonstration of your implementation will be conducted during tutorial time in Teaching Week 10. All Team members have to be present during the demonstration. Your designs need to be run on the lab machines. **Failing to attend the presentation will result in a mark of "0" for Assignment 1, and possibly a "F-IN" for the unit.**

The complete report, with the complete code from every member for the implementation together with a description on its development environment are required to be submitted. They must be zipped together and electronically submitted **by the project manager only on Blackboard by 9 AM Monday 04 May, 2020.**

Appendix 1 – Programs NOT allowed

- OpenVPN
- Github
- Open Cloud Player
- xHydra
- Angry IP Scanner
- tTorrent
- JPCSP
- VLC
- ImageMagick Studio LLC 2012
- Xfig
- GNUplot
- XPDF
- FileZilla
- Rename Master
- JDB
- DXTory
- Filebot
- HandBrake
- SoundCloud(desktop version)
- HydraIRC
- KeePassX
- Data Display Debugger (DDD)
- Zenmap
- Media Player Classic
- WinSCP
- PuTTY
- Youtube-DL
- Process Dashboard
- Bulk Rename Utility
- MobaXterm
- PDFsam.
- Winamp
- mIRC
- 7-Zip
- Cider
- FFmpeg
- AbiWord
- Mcmap
- Inkscape
- Xtreme Media Player (XMP)
- Pooka

- PDFBox
- µJava
- Audacity
- Freemake Video Downloader
- SCP
- fre:ac
- tar
- Xosview
- Grep User Interface (Gen_T)
- Mcmap graphical user interface
- REMAKE (A make file generator)
- BARALGA (Time Tracking Software)
- OooPlayer
- PeaZip archive program
- APT Package Manager Interface
- B_Team
- DISKPART
- DS9 (Astronomical imaging and data visualisation program)
- Universal Password Manager (UPM)
- PCSXR
- Nerstat (Command-line network utility tool for displaying network connections)
- DOSBox (DOS emulator)
- TeamSpeak (Audio communication application, communication via chat channels)
- SpeedRead
- Visual Explorer (file & directory size visualizer)
- FKILL
- Dirbuster
- Titus (Instant Messenger Client)
- CCK (a software to improve Dax Phyz a 2.5D physics engine)
- LFTP
- Jet Audio Music Player
- Project64 (Nintendo 64 Emulator)
- myWorkout Planner (Original Interface for exercise planner)
- iptables command (Original GUI from text-based command)
- Planet Burger (Original Interface for fast-food self serve kiosk)
- FastCopy (File transfer optimizer)
- Medusa (Penetration Tester tool)
- LAME (MP3 converter)
- VideoMach (Image & Video manipulation tool)
- JbidWatcher (Ebay Auction Sniping tool)
- Open Hardware Monitor (PC monitoring)

- Open Broadcast Software Studio
- Speedfan (Hardware Monitoring)
- Origin 2.0 (EA's game client)
- Chromis (Point-of-sale system)
- Make and GCC (Original GUI for Make and GCC command)
- TimeTrap (Time planner)
- GIMP (Open Source raster graphic editor)
- OpenGrok (Source code search and cross reference engine)