06-18158 Software Testing
Assessed Coursework 2
21 February 2012

Presentations, as described below, will take place during the lecture slots on 12th and 13th March. See the Module website to check the date of your presentation (http://www.cs.bham.ac.uk/~exc/Teaching/STesting/).

Written descriptions must be returned by **12:00 23 April 2012** to the School Reception. For your submission use the standard **Assignment Submission Cover Sheet** available from the student pigeonholes. Prior to the submission ensure that you have read and understand the **Guidance Notes on Plagiarism** (www.cs.bham.ac.uk/studentinfo/plagiarism.htm).

Testing Tools

Scenario

You have recently joined a small software house specialising in the development IT solutions to hospitals. Current applications include support of the drug databases and development of rules-based drug prescribing system. Technical aspects include quality control, complex data entry and retrieval, patient data encryption and wireless networking.

The software house has 10 technical staff with expertise in system design and production, database management and analysis, instrument control, decision support, knowledge and software engineering and communications, project management, statistics and training.

The manager is considering the introduction of software testing tools to ensure that all the software products are highly reliable and absolutely correct. You have been asked to evaluate one specific group of software tools and to provide a recommendation as to whether they should be purchased by the software house.

The current employees are not familiar with software testing tools, so you will need to provide a concise introduction outlining functionality, etc, of your selected group of tools.

The assignment

Your team's task is to:

- **research one category of software testing tools,**
- **provide a recommendation as to whether the tools should be purchased by the software house specialising in the development IT solutions to hospitals** (see the "Scenario" above).

The assignment consists of two parts: a presentation and a written summary. It is up to the members of each team to decide on the distribution of work amongst the members, on the allocation of tasks etc.

In the preparation of both the presentation and the summary you may consider the following general issues:

- The purpose and functionality of the given class of tools (what they are for, what they do)
- At what stage(s) of the software development cycle they can be used
- Inputs and outputs
- How do they work (a general principle)
- Illustrative examples
- Merits and pitfalls
- Views of the Software Testing community on your class of tools
- Examples of commercially available tools and open source tools in your category, commenting on
  - their software and hardware platforms
  - their ease to learn
  - price
  - evaluation by the users
- Your evaluation:
  - How well this class of tools would meet the needs of the software house described in the "Scenario"?
  - What are the pluses and minuses of the tools regarding these specific needs?
  - If the tools were introduced, would the software house need to make additional investments (e.g. employ additional people, buy additional equipment, install additional networks, etc)?

This list is indicative only; you are free to present and discuss any tool related issues that you consider important.

The module resources web page
      (http://www.cs.bham.ac.uk/~exc/Teaching/STesting/Web_resources.html)

contains many useful links, some specifically to the sites concerned with Testing Tools. You may use these as your starting point, but do not limit your research just to these sources.

Presentation

Your team will prepare and deliver a **20 minutes presentation** on the allotted category of Software Testing Tools.

- The presentation must be delivered by a single member of the team.

- The required method of delivery is a computer slide presentation (PowerPoint or Acrobat (pdf)).

- To ensure the smooth running of the presentations, copies of the presentations should be emailed to me (E.Claridge@cs.bham.ac.uk) **2 hours before the presentation at the latest** (earlier would be appreciated)**.** This will enable me to consolidate them and so minimise the delays associated with swapping the media, etc. during the presentations.

Written summary

The submission should include a **short** summary and a discussion which address the points suggested above. The document length should be approximately **1,500 words** (about 2 pages of text) but it should not exceed 2,000 words. Please state the word count on the title page of your document. While preparing the document please keep in mind that it will be used by your fellow students for study and revision.

You must include as an appendix a copy of your presentation slides (6 slides per page format if possible). The slides do not count towards the word / page limit stated above.

It is likely that much of the material you use for preparation of both your talk and the documentation is web based. It is necessary to appropriately acknowledge the use of all such material to avoid the allegation of plagiarism. It would be helpful for other students, who are going to use your document, if you could also include a list of the best web sites relevant to your tools.

Marking

A single mark will be given for both parts of this assessment. All members of the team will be given the same mark.

The following are the key factors for the assessment of presentation:

- Topic introduced clearly and at the appropriate level;
- Key points covered clearly and logically;
- Effective use of appropriate visual materials;
- Clear recommendation.

The following are the key factors for the assessment of written description:

- Topic covered at the appropriate level;
- Factually correct;
- Excellent range of source materials;
- Discussion demonstrates critical analysis and the ability to evaluate evidence;
- Clear recommendation, well justified;
- Adequate acknowledgement of sources;
- Correct citation of references.