National School of Business Management

B.Sc - Plymoth University

Group Assignment
Deadline : Thursday 20th July, 2017

Computer Architecture

Wednesday 21st June, 2017

1 Assignment Guidelines

1.1 Group Formation

It is very important that you follow these instructions when forming a group.

1. Maximum number of students is 4. (*Marks will be deducted if there are more than 4 students in your group!* : -5 marks for every extra student.)

2. A nominated student should be responsible as the group leader about the submission and equal workload division among group members.

3. We accept only one submission per group (Again, the leader is responsible for the submission).

1.2 Documentation

The answers for the questions and a comprehensive explanation for each and every action taken when forming your answer should be compiled into one document as a general report. The report carries 5 marks. When producing the document you must adhere to following,

1. The first page of the repost *must* clearly state index numbers of your group members.

2. The group name should be clearly marked.

3. Plagiarism of any kind will not be tolerated at all. Where if similar/copied submissions are noted both submission will be dishonored and marks will not be awarded for both. It is very important that we will not tolerate any kind of plagiarism and they are considered as an academic misconduct which will be referred to a disciplinary action.

4. The document should include following sections,

   (a) Introduction and a briefing about Assembly Language.

   (b) Answers for each question.

   (c) Brief explanation about each and every answer as a different subsection. (Suggestion : explain your answer line by line in that section.)

(d) Any resources that you have used. Ex. web-sites, books etc.

(e) Format of your report should have a similar structure to this document. (Clearly marked sections,titles, resources, footnotes)

(f) No fancy templates should be used.

(g) Font size for text is 12pt.

1.3 Submissions

Each group should submit exactly *ONE* report. When submitting your answer you must,

1. Adhere to deadlines. Late submissions are *NOT* allowed. (Deadline: Thursday 20^{th} July, 2017)

2. You must submit hard copy of the report accompanied with a soft copy to program office. (Group leader must submit representing whole group.)

3. Three answered questions to be named as Question1.s , Question2.s , Question3.s in the same directory as your report is in.

4. Finally, *Compact Disk* containing your report and 3 answers (as described above) should be submitted as soft copy along with the hard copy.

2 Questions

Following are the questions to be completed. Each of them are carrying equal amount of marks (5 marks for each question.).

2.1 Problem 1

Using the registers available to you, demonstrate basic mathematical operations (addition, multiplication etc.). For example assign a value to r0 and r1 add them up and store the answer in some other register. Do perform all mathematical operations possible. (requires a bit of research about available commands.)

2.2 Problem 2

Write a piece of code to assign a numerical value to a register and find the factorial of that number and assign the final value to r0. (Hint : Use loops)

2.3 Problem 3

Write a code to assign two values (consider A,B) to registers and compare them. If the first number is larger than the second print a message to console "A is larger than B".

Also in your report (Preferably in a separate section) include any SWI calls that you have used and briefly explain those SWI commands you have used. Also list down any other available SWI commands. (No explanation needed if you have not used them.)