# Jordan University of Science and Technology
## CS102  Introduction to programming lab
## First Semester 2009-2010
## Mid Lab Exam 1-12-2010, Wed

**Name:** ----------------------------------------------          **ID:** ------------------------

**Instructor:** ----------------------------------------          **Section:** -------------------

**Lab:** ----------------------          **PC#:** ---------------------

1- *Create a folder with your id number and save this folder at the Desktop      Ex. 20100171000*

2-*For each question create a folder and name it as project#_id and save your project there.*

*Ex. Project2_20100171000*

3- *Write your name, section, your instructor name as a comment in each project*

4- *Compress your work and upload it to the e-learning + upload folder as the last step*

5- *Your Programs should be full of comments and with will identifier names*

**Q1) Write a program that prompts three integer numbers from the user then prints the sum, average, largest**

       **EX.** *Please insert three integer numbers: 25   37   13*
       *Sum is 75*
       *Average is 25*
       *Largest is 37*

**Q2) Write a program that prompts the user to insert a number and finds the result of the following sequence**

$$\sum_{x=0}^{n} 2x^2+x+5 \qquad\qquad \textbf{by using any loop}$$

       **EX.** *Please insert a number: 3*
       *The sum is 54*

**Q3) Write a program that asks the user if he/she want to add a new record, the answer should be (Y / N) if the user answer (Y) then the program prompts the user to insert the following :( Student Name, The grade) Multiple time until the user press (N). The program will prints the average of the grades and the number of failures and the number of passes**       **(loop + selection )**

       ***Ex.***
       *Do you want to add: Y*
       *Please insert the student Name: Ali*
       *Please insert the grade: 90*

       *Do you want to add: Y*
       *Please insert the student Name: Ahmed*
       *Please insert the grade: 80*

       *Do you want to add: N*

       *The Average is  85*
       *The # of passes : 2*
       *The # of failure : 0*

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5- *Your Programs should be full of comments and with will identifier names*

**Q1)Write a program that prompts three integer numbers from the user then prints the product, average, smallest.**

> **EX.** *Please insert three integer numbers: 6   10   8*
> *Product is  480*
> *Average is  8*
> *Smallest is  6*

**Q2) Write a program that prompts the user to insert a number and finds the result of the following sequence**

$$\sum_{x=0}^{n} 7x^3 + 2x$$                    **by using any loop**

> **EX.** *Please insert a number: 2*
> *The sum is 69*

**Q3) Write a program that asks the user if he/she want to add a new record, the answer should be (Y / N) if the user answer (Y) then the program prompts the user to insert the following :( Student Name, The grade) Multiple time until the user press (N). The program will prints the average of the grades and the number of failures and the number of passes**                    **(loop + selection )**

> **Ex.**
> *Do you want to add: Y*
> *Please insert the student Name: Ali*
> *Please insert the grade: 90*
>
> *Do you want to add: Y*
> *Please insert the student Name: Ahmed*
> *Please insert the grade: 80*
>
> *Do you want to add: N*
>
> *The Average is  85*
> *The # of passes : 2*
> *The # of failure : 0*

## Assessment criteria:

| Category | Marks Allocated | Student Mark |
|---|:---:|:---:|
| • **Project 1**        (0- if program doesn't compile) | | |
| 1.  The program Runs   - (will coded not empty) | 2 | |
| 2.  The Output is Perfect | 3 | |
| • **Project 2**        (0- if program doesn't compile) | | 5 |
| 1.  The program Runs   - (will coded not empty) | 2 | |
| 2.  The Output is Perfect | 3 | |
| • **Project 3** | | 5 |
| • **Code window -** | | |
| 1.  Effective use of **comments (**name, ID, description of statements, …) | 1 | |
| 2.  Appropriate use of **identifier names** (variables and constants) | 1 | |
| 3.  Correct **read/print statements** (cin , cout) | 1 | |
| 4.  Using a loop | 1 | |
| 5.  Using a selection | 1 | |
| **(0 - if program doesn't compile)** | | 5 |
|     Give an output | 2 | |
| Correct results and output display | 3 | |
| | | 5 |
| **Total** | 20 | |

Section No ----------------------------------

| No | Student id | Student Name | P1 | | P2 | | P3 | | | | | | Total |
|---|---|---|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|
| | | | 2 | 3 | 2 | 3 | 1 | 1 | 1 | 1 | 2 | 3 | 20 |
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