ICS 103, Term 132

Computer Programming in C
Quiz# 2

Date: Sunday, March 9, 2014

Q1. Consider the following program. What will be the output for the different values of x typed by the user?

```c
#include <stdio.h>
int main() {
int x ;

scanf("%d",&x);
switch(x) {
   case 4:
   case 2: if(x==4)
             x=x-3;
           x=x+1;
   case 5:
   case 0: x=x+2;
   case 3:
   case 1: x=x+3;
           break;
   default : x=x+4;
  }
  printf("%d\n",x);
return 0;}
```

Value of x typed By user	Program output
4	7
2	8
5	10
0	5
15	19

Q2. Fill the column of **printed output** for the corresponding input. The program is run 5 times and each time the input is shown in the first column.

```c
#include <stdio.h>
int main () {
int x,y;
scanf("%d%d",&x,&y);
if(x<20)
  if(y>=10)
     if (x>= 15)
        printf("A");
     else
        printf("B");
  else
     if(y >= 0)
        printf("C");
     else
        printf("D");
else
  printf ("E");
return 0;
```

INPUT		PRINTED OUTPUT
15	-3	D
15	10	A
19	5	C
20	10	E
14	10	B

Q3. Write a function that receives the Cartesian coordinates of two points (x1,y1) and (x2,y2) and computes and prints their midpoint computed by the following formula:

$$(xm, ym) = (\frac{x1 + x2}{2}, \frac{y1 + y2}{2})$$

Assume that the input arguments are of type double.

```
void  MidPoint (double x1, double y1, double x2, double y2)
{

   double xm = (x1 + x2)/2;
   double ym = (y1 + y2)/2;

   printf("The mid point of (%.2f,%.2f) and (%.2f,%.2f) is  (%.2f,%.2f) \n", x1, y1, x2, y2, xm, ym);


}
```