

King Saud University College of Computer and Information Sciences Computer Science Department			
Introduction to Java	CSC 111	Programming with	First Semester 1440-1441

Q1. Write the output of the following program:

```
a. int i, j;
   for (i = 1; i <= 5; i++){
   for (j = (i + 1); j <= 5; j++)
   System.out.printf("%5d", j);
   System.out.println();
   }
```

Output:

```
~~~~ 2 ~~~~ 3 ~~~~ 4 ~~~~ 5
~~~~ 3 ~~~~ 4 ~~~~ 5
~~~~ 4 ~~~~ 5
~~~~ 5
```

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```
b. int i = 0;
   while (i < 6){
   for(int j = 0; j < 6; j ++ ){
   if ( i % 2 != 0)
   break ;
   if(j%2==0){
   System.out.print(" ");
   continue ;
   }
   System.out.print("o");
   }
   System.out.println();
   i++;
   }
```

Output:

```
~o ~o~ o
```

-

```
~o ~o~ o
```

-

```
~o~ o ~o
```

-

-

```

c. int i,j;
   for(i=2 ; i<4 ; i++){
       j = 1;
       System.out.print(i+" | ");
       do{
           System.out.print(" "+ i*j);
           j+=2 ;
       }while (j<7);
       System.out.println();
   }

```

Output:

```

2 | 2 6 10
3 | 3 9 15
-

```

d. Show the output and Trace the code

```

int i=1;
do{
    int num=1;
    for(int j=1; j<= i; j++)
    {
        System.out.print(num+"G");
        num += 2;
    }
    System.out.println();
    i++;
}while (i <= 5);

```

i	j	num	Output1
1	1	1	1G
	2	3	1G3G
	3	5	1G3G5G
2	1	1	1G3G5G
	2	3	1G3G5G7G
	3	5	1G3G5G7G9G
3	1	1	
	2	3	
	3	5	
4	1	1	
	2	3	
	3	5	
5	1	1	
	2	3	
	3	5	
6	1	1	
	2	3	
	3	5	

Q2. Write a loop to do the following:

a. Given an input value N, write a **nested-loop** to display N rows of the form 1,2,...N, then 2,3,...N+1 and so on

Sample output:

Enter a number 5	Enter a number 4
12345	1234
23456	2345
34567	3456
45678	4567
56789	

```

int num;
int N = input.nextInt();
for (int i=1; i<=N; i++) {
    for(int j=1; j<=(i+N-1); j++) {
        System.out.print(j);
    }
    System.out.println();
}

```