JAVA PROGRAMMING LAB

BASIC PROGRAMS Date: 15.07.2020

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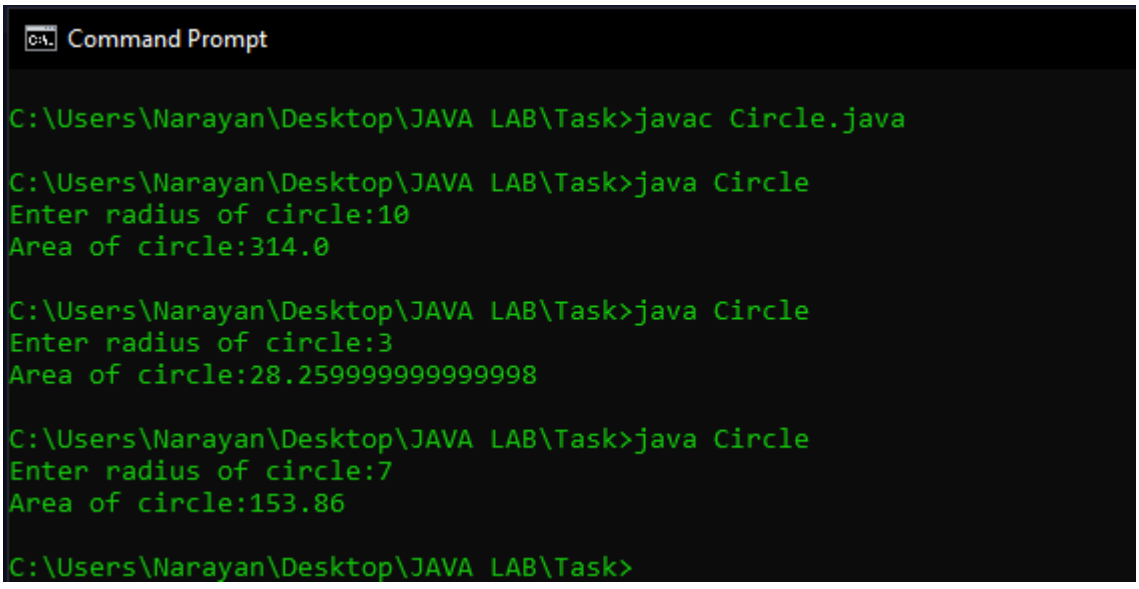
1. Read the radius and print the area of a circle

   Ans:
   Code:

```
import java.util.Scanner;
public class Circle
{
   public static void main(String[] args)
   {
      int r;
      double pi = 3.14, area;
      Scanner s = new Scanner(System.in);
      System.out.print("Enter radius of circle:");
      r = s.nextInt();
      area = pi * r * r;
      System.out.println("Area of circle:"+area);
   }
}
```

Output:



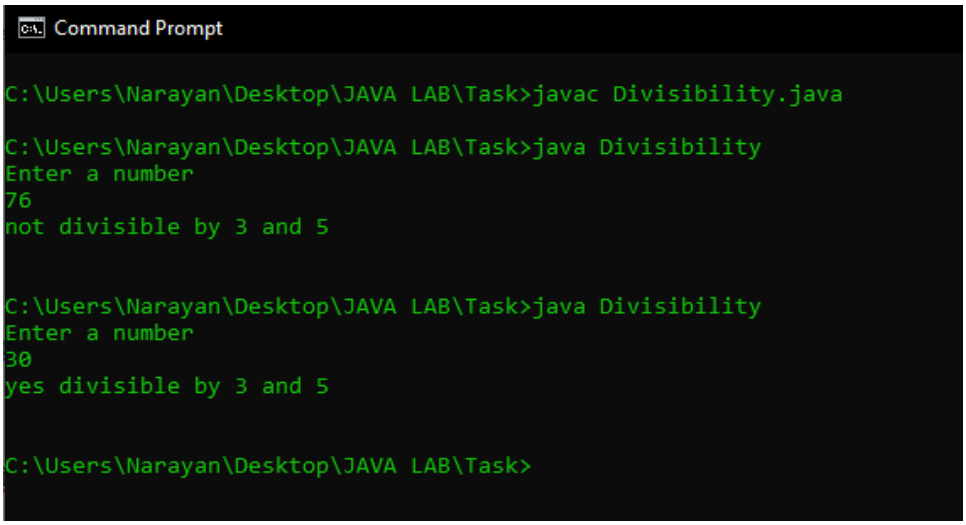
2. Read the number and check whether it is divisible by 3 and 5.

Ans:

Code:

```
import java.util.Scanner;
class Divisibility{
    public static void main(String [] args)
    {
        System.out.println("Enter a number");
        Scanner s = new Scanner(System.in);
        int a;
        a = s.nextInt();
        if(a%15 == 0){
            System.out.println("yes divisible by 3 and 5\n");
        }
        else{
            System.out.println("not divisible by 3 and 5\n");
        }
    }
}
```

Output:



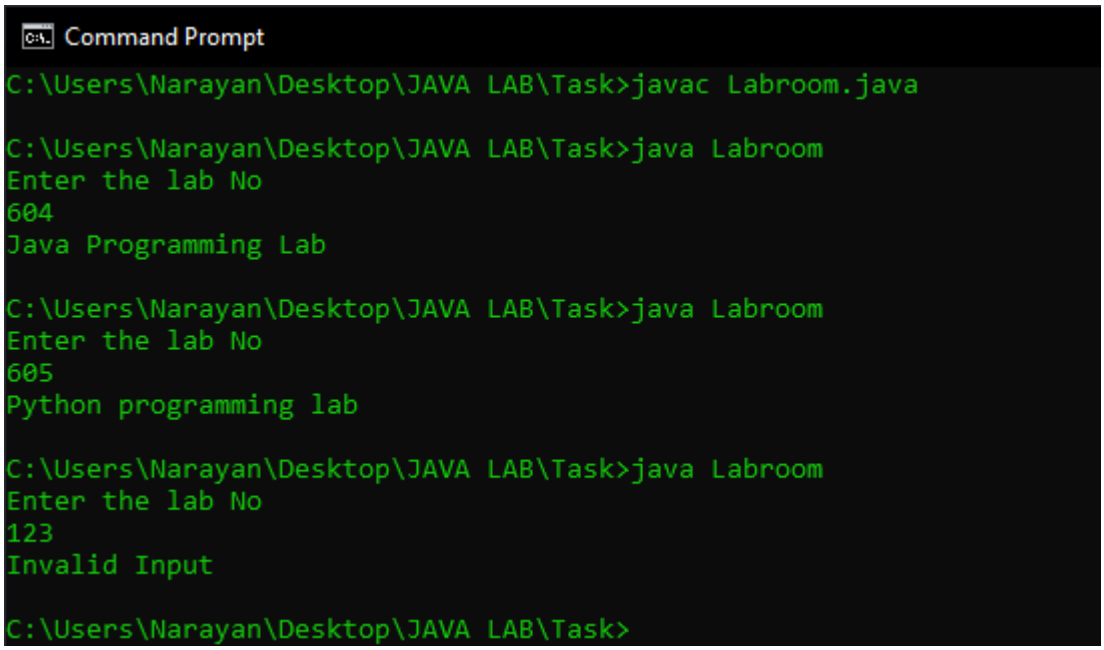
3. Display Subject Name based on room number. If the user enters 604 then display Java Programming , If the user enters 605 then display Python programming for any other input display Invalid input to the user

Ans:

Code:

```
import java.util.Scanner;

class Labroom{
    public static void main(String [] args){
        System.out.println("Enter the lab No");
        Scanner s = new Scanner(System.in);
        int a;
        a = s.nextInt();
        if(a == 604){
            System.out.println("Java Programming Lab");
        }
        else if(a == 605){
            System.out.println("Python programming lab");
        }
        else{
            System.out.println("Invalid Input");
        }
    }
}
```

Output:

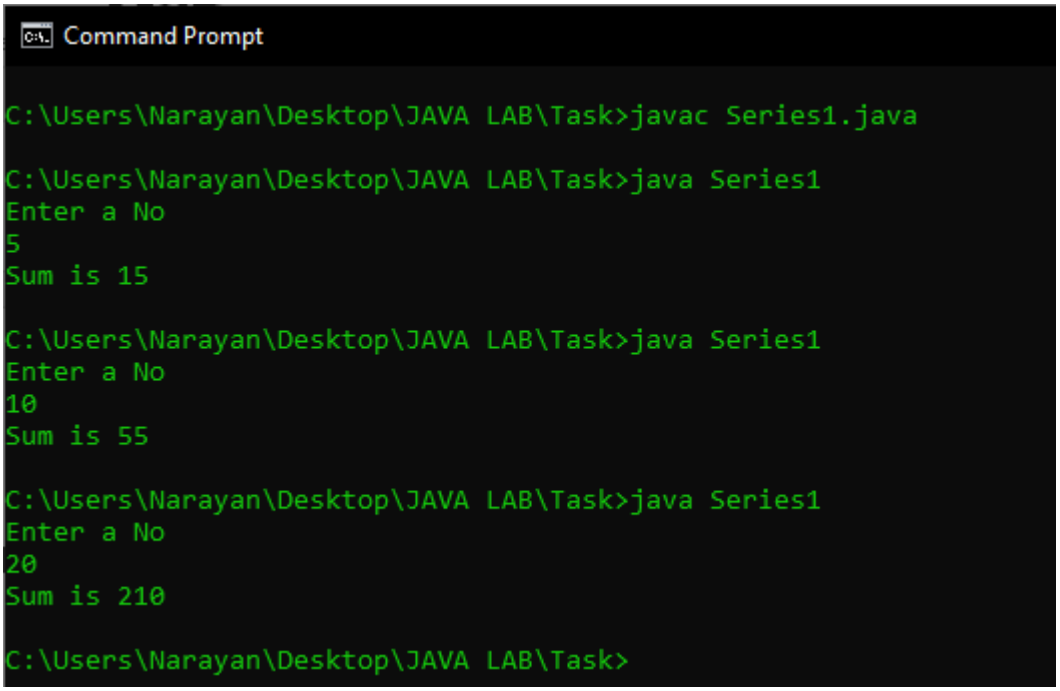


4. Print the sum of first n numbers. If n is 3 then print the sum of 1+2+3 to the user. Get n from the user

Ans:
Code:

```
import java.util.Scanner;

class Series1{
    public static void main(String [] args){
        System.out.println("Enter a No");
        Scanner s = new Scanner(System.in);
        int a,sum=0;
        a = s.nextInt();
        for(int i = 1; i<a+1;i++){
            sum = sum + i;
        }
        System.out.print("Sum is ");
        System.out.println(sum);
    }
}
```

Output:



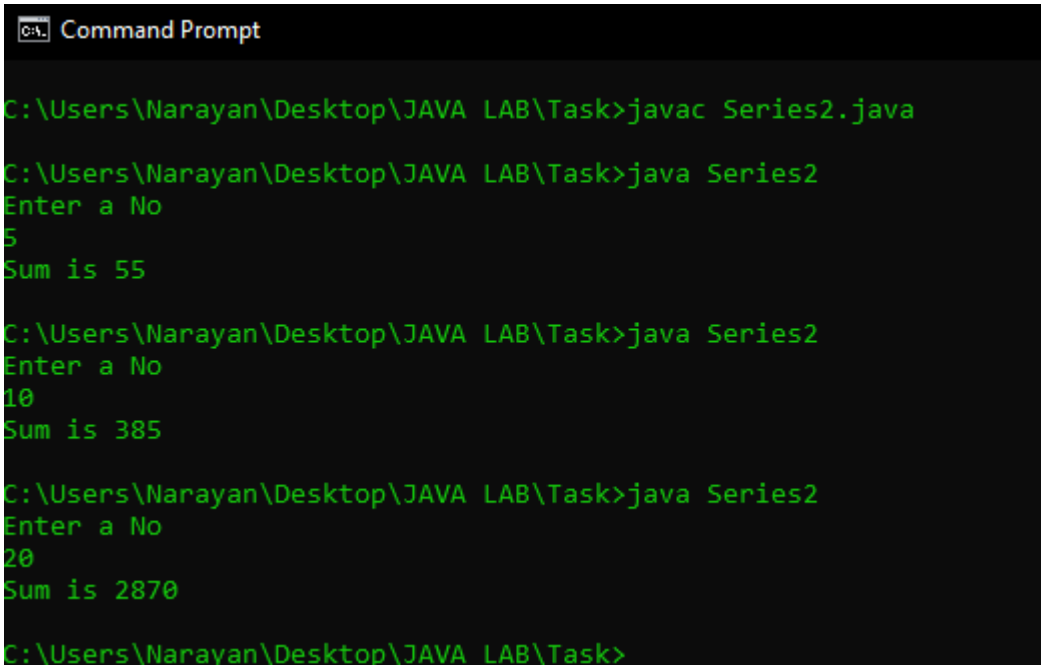
5. Print the sum of the series $1^2+2^2+3^2$ up to n terms

Ans:

Code:

```
import java.util.Scanner;

class Series2{
    public static void main(String [] args){
        System.out.println("Enter a No");
        Scanner s = new Scanner(System.in);
        int a,sum=0;
        a = s.nextInt();
        for(int i = 1; i<a+1;i++){
            sum = sum + i*i;
        }
        System.out.print("Sum is ");
        System.out.println(sum);
    }
}
```

Output:



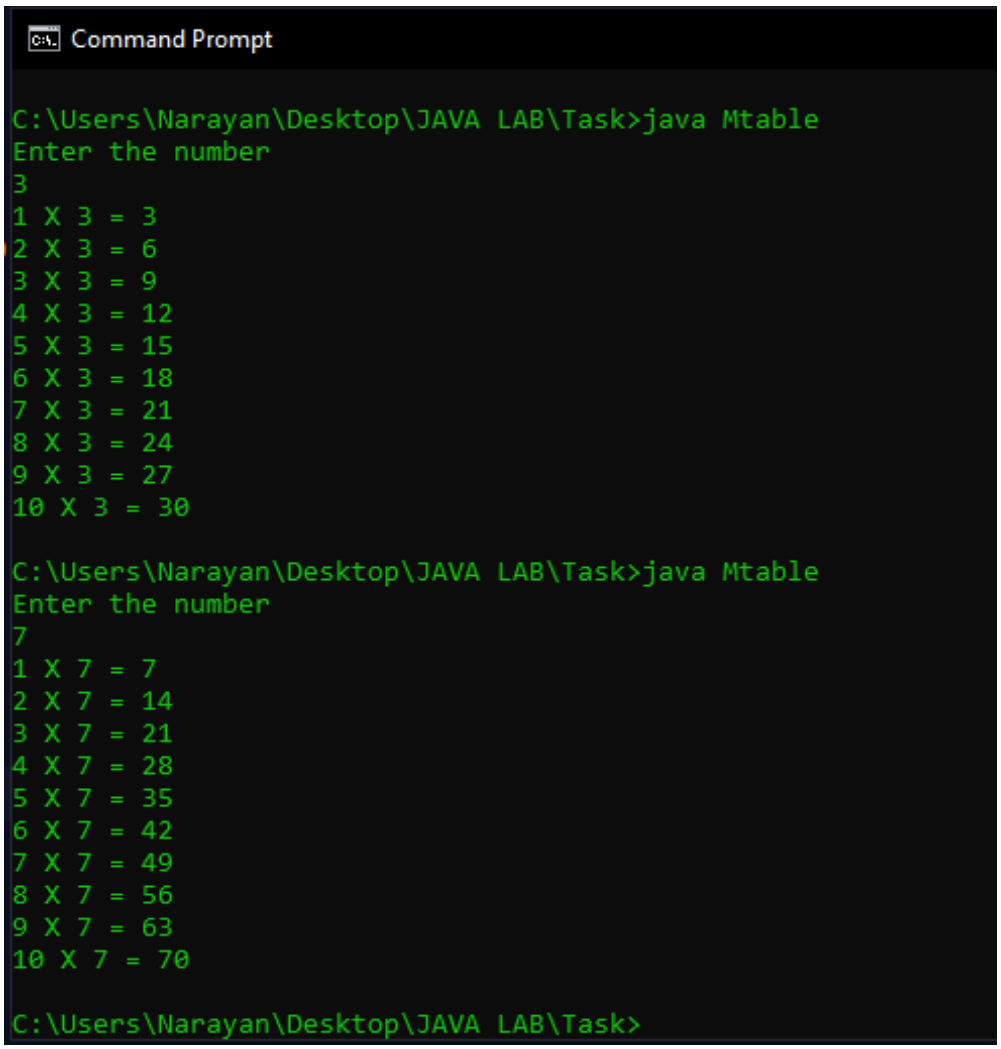
6. Print the multiplication table by getting the n from the user.

Ans:

Code:

```
import java.util.Scanner;
class Mtable{
    public static void main(String [] args)
    {
        System.out.println("Enter the number");
        Scanner s = new Scanner(System.in);
        int a;
        a = s.nextInt();
        for(int i = 1; i<11; i++){
            System.out.print(i);
            System.out.print(" X ");
            System.out.print(a);
            System.out.print(" = ");
            System.out.println(a*i);
        }
    }
}
```

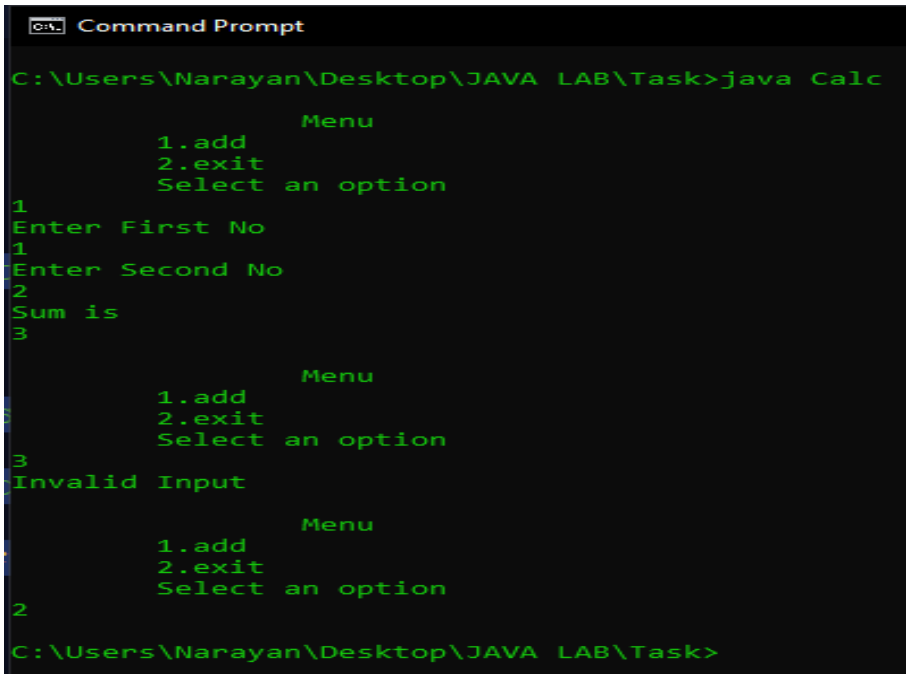
Output:



7. Provide the option of adding two numbers to the user until the user wants to exit.
   Ans:
   Code:

```
import java.util.Scanner;

class Calc{
    public static void main(String [] args){
        Scanner s = new Scanner(System.in);
        int a = 0;
        do{

    System.out.println("\n\t\tMenu\n\t1.add\n\t2.exit\n\tSelect an
option");
                a = s.nextInt();
                if(a == 1){
                    int n1,n2;
                    System.out.println("Enter First No");
                    n1 = s.nextInt();
                    System.out.println("Enter Second No");
                    n2 = s.nextInt();
                    System.out.println("Sum is ");
                    System.out.println(n1+n2);
                }
                else if(a != 2){
                    System.out.println("Invalid Input");
                }
            }while(a != 2);
    }
}
```

Output:



8. Print this pattern for n lines

(a)

```
*
**
***
****
```

(b)

```
1234
123
12
1
```

(c)

```
1
12
123
1234
1234
123
12
1
```

Ans:

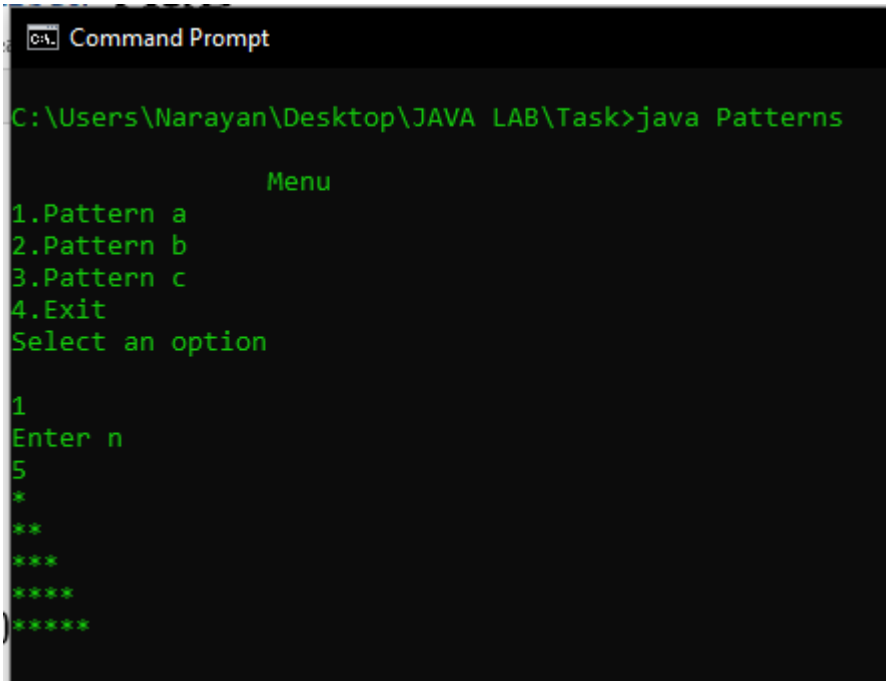
Code:

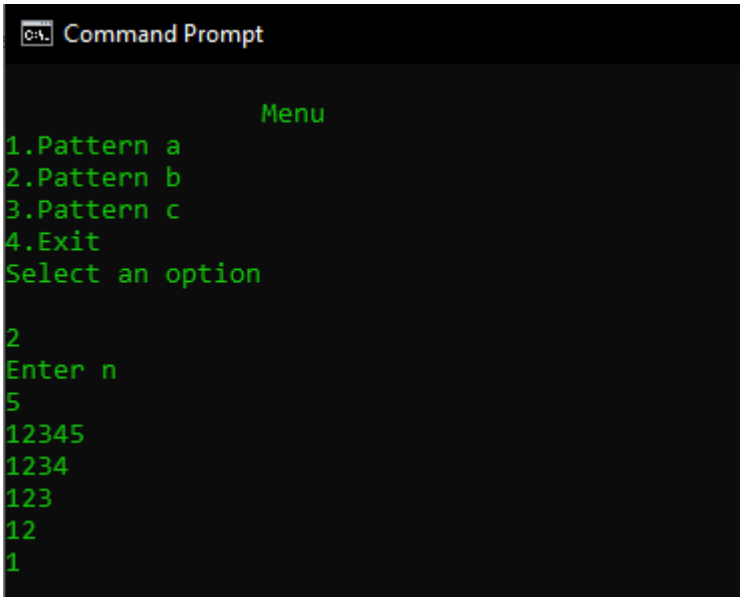
```
import java.util.Scanner;


class Patterns{
	public static void main(String [] args){
		Scanner s = new Scanner(System.in);
		int a = 0;
		do{
			System.out.println("\n\t\tMenu\n1.Pattern a\n2.Pattern b\n3.Pattern c\n4.Exit\nSelect an option\n");
			a = s.nextInt();
			if(a == 1){
```

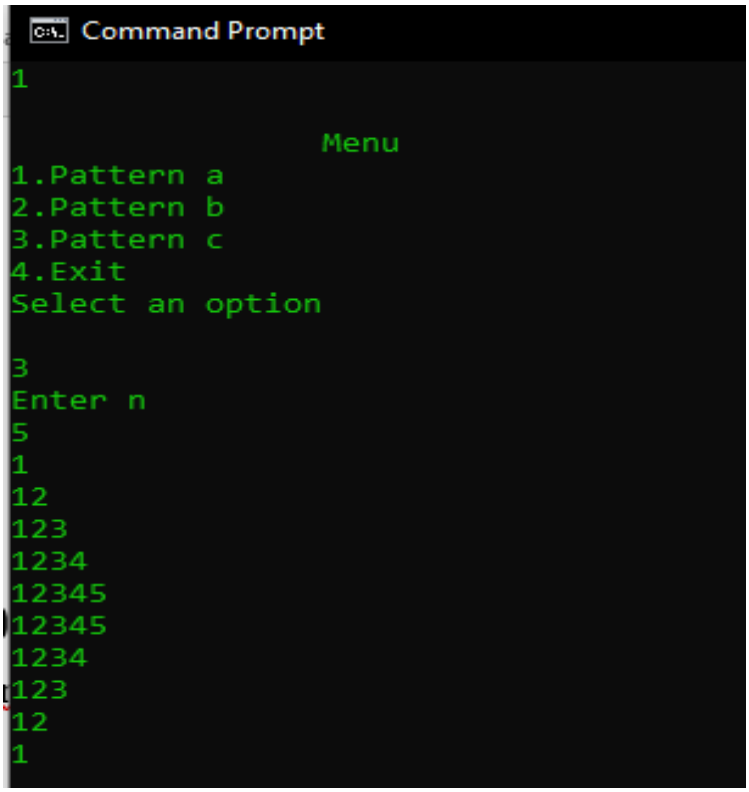
```
            int n;
            System.out.println("Enter n");
            n = s.nextInt();
            for(int i = 1;i < n+1;i++){
                    for(int j = 0; j < i; j++){
                            System.out.print("*");
                    }
                    System.out.print('\n');
            }
    }
    else if(a == 2){
            System.out.println("Enter n");
            int n;
            n = s.nextInt();
            for(int i = n; i>0; i--){
                    for(int j = 1; j<i+1; j++){
                            System.out.print(j);
                    }
                    System.out.print('\n');
            }
    }
    else if(a == 3){
            System.out.println("Enter n");
            int n;
            n = s.nextInt();
            for(int i = 1; i<n+1; i++){
                    for(int j = 1; j<i+1; j++){
                            System.out.print(j);
                    }
                    System.out.print('\n');
            }
            for(int i = n; i>0; i--){
```

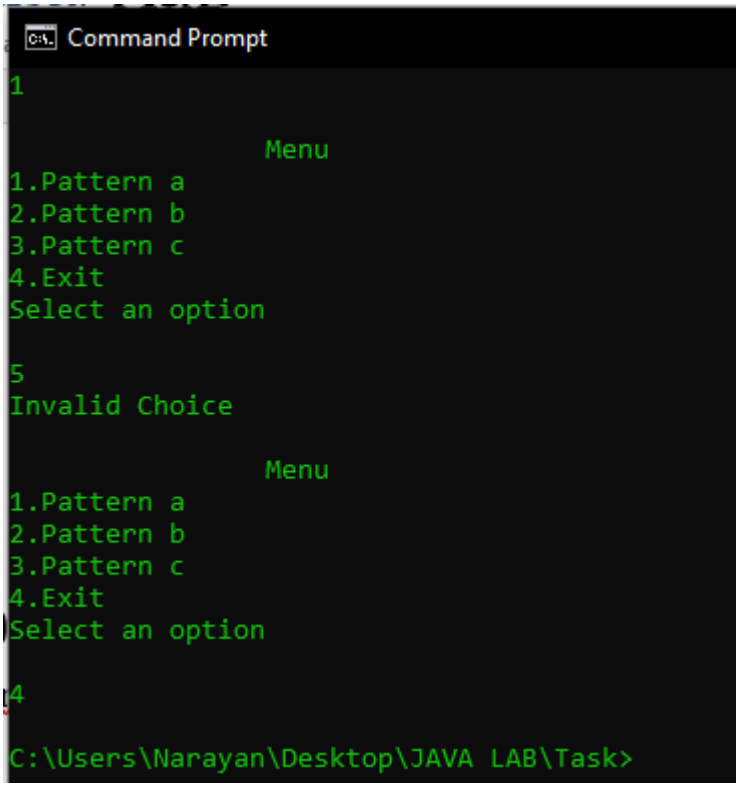
```
                                        for(int j = 1; j<i+1; j++){
                                                System.out.print(j);
                                        }
                                        System.out.print('\n');
                                }
                        }
                        else if(a != 4){
                                System.out.println("Invalid Choice");
                        }
                }while(a != 4);
        }
}
```

Output:




Command Prompt
Menu
1.Pattern a
2.Pattern b
3.Pattern c
4.Exit
Select an option
2
Enter n
5
12345
1234
123
12
1


Command Prompt
1
Menu
1.Pattern a
2.Pattern b
3.Pattern c
4.Exit
Select an option
3
Enter n
5
1
12
123
1234
12345
12345
1234
123
12
1


Command Prompt
1
Menu
1.Pattern a
2.Pattern b
3.Pattern c
4.Exit
Select an option
5
Invalid Choice
Menu
1.Pattern a
2.Pattern b
3.Pattern c
4.Exit
Select an option
4
C:\Users\Narayan\Desktop\JAVA LAB\Task>