**Assignment 3**

**Section 1:**

**Snippet 1:**

public class InfiniteForLoop {

public static void main(String[] args) {

for (int i = 0; i < 10; i--) {

System.out.println(i);

}

}

}

// Error to investigate: Why does this loop run infinitely? How should the loop control variable be adjusted?

We can control the loop incrementing the I variable.

**Corrected Code:**

public class InfiniteForLoop {

public static void main(String[] args) {

for (int i = 0; i < 10; i++) {

System.out.println(i);

}

}

}

**Output:**

D:\Feb 25>javac InfiniteForLoop.java

D:\Feb 25>

D:\Feb 25>java InfiniteForLoop

0

1

2

3

4

5

6

7

8

9

D:\Feb 25>

===================================================================================

**Snippet 2:**

public class IncorrectWhileCondition {

public static void main(String[] args) {

int count = 5;

while (count = 0) {

System.out.println(count);

count--;

}

}

}

// Error to investigate: Why does the loop not execute as expected? What is the issue with the condition in the `while` loop

**Error:**

D:\Feb 25>javac IncorrectWhileCondition.java

IncorrectWhileCondition.java:4: error: incompatible types: int cannot be converted to boolean

while (count = 0) {

In the given code condition of the while loop is count=0, I.e false condition and while loop execute only when the condition is true that’s why our code is not executed as expected.

**Corrected Code:**

public class IncorrectWhileCondition {

public static void main(String[] args) {

int count = 5;

while (count > 0) {

System.out.println(count);

count--;

}

}

}

**Output:**

D:\Feb 25>javac IncorrectWhileCondition.java

D:\Feb 25>java IncorrectWhileCondition

5

4

3

2

1

======================================================================================

**Snippet 3:**

public class DoWhileIncorrectCondition {

public static void main(String[] args) {

int num = 0;

do {

System.out.println(num);

num++;

} while (num > 0); }

}

// Error to investigate: Why does the loop only execute once? What is wrong with the loop condition in the `do

while` loop?

Here code runs infinitely because of while condition num>0 it is going to true for all case .

**Corrected Code:**

public class DoWhileIncorrectCondition {

public static void main(String[] args) {

int num = 0;

do {

System.out.println(num);

num++;

} while (num <8); }

}

**Output:**

D:\Feb 25>javac DoWhileIncorrectCondition.java

D:\Feb 25>java DoWhileIncorrectCondition

0

1

2

3

4

5

6

7

**Snippet 4:**

public class OffByOneErrorForLoop {

public static void main(String[] args) {

for (int i = 1; i <= 10; i++) {

System.out.println(i);

}

// Expected: 10 iterations with numbers 1 to 10

// Actual: Prints numbers 1 to 10, but the task expected only 1 to 9

}

}

// Error to investigate: What is the issue with the loop boundaries? How should the loop be adjusted to meet the

expected output?

We can meet the expected output by initializing i=o;

**Corrected Code:**

public class OffByOneErrorForLoop {

public static void main(String[] args) {

for (int i = 0; i <= 10; i++) {

System.out.println(i);

}

// Expected: 10 iterations with numbers 1 to 10

// Actual: Prints numbers 1 to 10, but the task expected only 1 to 9

}

}

Output;

D:\Feb 25>javac OffByOneErrorForLoop.java

D:\Feb 25>java OffByOneErrorForLoop

0

1

2

3

4

5

6

7

8

9

10

**Snippet 5:**

public class WrongInitializationForLoop {

public static void main(String[] args) {

for (int i = 10; i >= 0; i++) {

System.out.println(i);

}

}

}

// Error to investigate: Why does this loop not print numbers in the expected order? What is the problem with the initialization and update statements in the `for` loop

In this condition I is always true therefore loop runes infinitely .we can print the no. by decrementing the i variable I.e i--

public class WrongInitializationForLoop {

public static void main(String[] args) {

for (int i = 10; i >= 0; i++) {

System.out.println(i);

}

}

}

Output:

D:\Feb 25>javac WrongInitializationForLoop.java

D:\Feb 25>java WrongInitializationForLoop

10

9

8

7

6

5

4

3

2

1

0

**Snippet 6:**

public class MisplacedForLoopBody {

public static void main(String[] args) {

for (int i = 0; i < 5; i++)

System.out.println(i);

System.out.println("Done");

}

}

// Error to investigate: Why does "Done" print only once, outside the loop? How should the loop body be enclosed to include all statements within the loop?

Output:

D:\Feb 25>javac MisplacedForLoopBody.java

D:\Feb 25>java MisplacedForLoopBody

0

1

2

3

4

Done

Done is printed only once because loop body is not closed. By enclosing a loop body we can print all statement withing loop

**Corrected Code:**

public class MisplacedForLoopBody {

public static void main(String[] args) {

for (int i = 0; i < 5; i++) {

System.out.println(i);

System.out.println("Done"); }

}

}

Output:

D:\Feb 25>javac MisplacedForLoopBody.java

D:\Feb 25>java MisplacedForLoopBody

0

Done

1

Done

2

Done

3

Done

4

Done

=========================================================================

**Snippet 7:**

public class UninitializedWhileLoop {

public static void main(String[] args) {

int count; while (count < 10) {

System.out.println(count);

count++;

}

}

}

// Error to investigate: Why does this code produce a compilation error? What needs to be done to initialize the loop variable properly

I**n this code we have not declare value for variable count. So needs to declare count =0**

public class UninitializedWhileLoop {

public static void main(String[] args) {

int count=0;

while (count < 10) {

System.out.println(count);

count++;

}

}

}

Output:

D:\Feb 25>javac UninitializedWhileLoop.java

D:\Feb 25>java UninitializedWhileLoop

0

1

2

3

4

5

6

7

8

9

===========================================================================

**Snippet 8:**

public class OffByOneDoWhileLoop {

public static void main(String[] args) {

int num = 1;

do {

System.out.println(num);

num--;

} while (num > 0);

}

}

// Error to investigate: Why does this loop print unexpected numbers? What adjustments are needed to print the

numbers from 1 to 5?

Output:

D:\Feb 25>javac OffByOneDoWhileLoop.java

D:\Feb 25>java OffByOneDoWhileLoop

1

It is printed 1 because in do while condition 1 printed the statement and then check the condition and num is decrementing and whilecondition goes to false state .

By incrementing the num variable and updating the while condition to n<6 we can get the output.

**Corrected Code:**

public class OffByOneDoWhileLoop {

public static void main(String[] args) {

int num =1 ;

do {

System.out.println(num);

num++;

} while (num < 6);

}

}

D:\Feb 25>javac OffByOneDoWhileLoop.java

D:\Feb 25>java OffByOneDoWhileLoop

1

2

3

4

5

===========================================================================

Snippet 9:

public class InfiniteForLoopUpdate {

public static void main(String[] args) {

for (int i = 0; i < 5; i += 2) {

System.out.println(i);

}

}

}

// Error to investigate: Why does the loop print unexpected results or run infinitely? How should the loop update expression be corrected?

D:\Feb 25>javac InfiniteForLoopUpdate.java

D:\Feb 25>java InfiniteForLoopUpdate

0

2

4

Updated Code:

public static void main(String[] args) {

for (int i = 0; i < 5; i ++) {

System.out.println(i);

}

}

}

Output:

D:\Feb 25>javac InfiniteForLoopUpdate.java

D:\Feb 25>java InfiniteForLoopUpdate

0

1

2

3

4

**Snippet 10:**

public class IncorrectWhileLoopControl {

public static void main(String[] args) {

int num = 10;

while (num = 10) {

System.out.println(num);

num--;

}

}

}

// Error to investigate: Why does the loop execute indefinitely? What is wrong with the loop condition?

D:\Feb 25>javac IncorrectWhileLoopControl.java

IncorrectWhileLoopControl.java:4: error: incompatible types: int cannot be converted to boolean

while (num = 10) {

In while condition 10 value is assigning to num variable. Num has int data type and is not converted into boolean. If we replaceit by num==10 , we get a output.

Corrected Code:

public class IncorrectWhileLoopControl {

public static void main(String[] args) {

int num = 10;

while (num = =10) {

System.out.println(num);

num--;

}

}

}

**Output:**

D:\Feb 25>javac IncorrectWhileLoopControl.java

D:\Feb 25>java IncorrectWhileLoopControl

10

**Snippet 11:**

public class IncorrectLoopUpdate {

public static void main(String[] args) {

int i = 0;

while (i < 5) {

System.out.println(i);

i += 2;

}

}

}

// Error to investigate: What will be the output of this loop? How should the loop variable be updated to achieve the desired result

Output:

D:\Feb 25>javac IncorrectLoopUpdate.java

D:\Feb 25>java IncorrectLoopUpdate

0

2

4

===============================================================================

**Snippet 12:**

public class LoopVariableScope {

public static void main(String[] args) {

for (int i = 0; i < 5; i++) {

int x = i \* 2;

}

System.out.println(x);

}

}

// Error to investigate: Why does the variable 'x' cause a compilation error?

Error: D:\Feb 25>javac LoopVariableScope.java

LoopVariableScope.java:6: error: cannot find symbol

System.out.println(x); // Error: 'x' is not accessible here

^

symbol: variable x

location: class LoopVariableScope

Variable x is defined in a for loop so we can’t access it out for loop.

public class LoopVariableScope {

public static void main(String[] args) {

Int x=0;

for (int i = 0; i < 5; i++) {

x = i \* 2;

}

System.out.println(x);

}

}

Output:

D:\Feb 25>javac LoopVariableScope.java

D:\Feb 25>java LoopVariableScope

8

=============================================================================

**SECTION 2: Guess the Output**

**Snippet 1:**

public class NestedLoopOutput {

public static void main(String[] args) {

for (int i = 1; i <= 3; i++) {

for (int j = 1; j <= 2; j++) {

System.out.print(i + " " + j + " ");

}

System.out.println(); }

}

}

i j sop

1. 1 1 1

2 1 2

2 1 2 1

2 2 2

3 1 3 1

2 3 2

**Output**:

1 1 1 2

2 1 2 2

3 1 3 2

=====================================================================

**Snippet 2:**

public class DecrementingLoop {

public static void main(String[] args) {

int total = 0;

for (int i = 5; i > 0; i--) {

total += i;

if (i == 3) continue;

total -= 1;

}

System.out.println(total);

}

}

**i**  **total Final total**

5 5 4

4 4+4=8 7

3 7+3=10 skip this step as continue and condition i==3 comes

2 10+2=12 11

1 11+1=12 11

============================================================

**Snippet 3:**

public class WhileLoopBreak {

public static void main(String[] args) {

int count = 0;

while (count < 5) {

System.out.print(count + " ");

count++;

if (count == 3) break;

}

System.out.println(count);

}

}

Count SOP SOP2

1. 0

1 1

2 2

3 3

**Output**:

0 1 2 3

==================================================================

**Snippet 4:**

import java.util.\*;

public class DoWhileLoop{

public static void main(String[] args){

int i=1;

do{

System.out.print(i+" "); //1 2 3 4 5

i++;

}while(i<5);

System.out.println(i);

}

}

Expected Output:

1 2 3 4 5

=================================================================

**Snippet 5:**

import java.util.\*;

public class ConditionalLoopOutput{

public static void main(String[] args){

int num=1; //num is initialized to 1

for (int i=1; i<=4;i++){ //checks I=1, 2, 3, 4

if (i%2==0){ //if yes then checks i is even or odd

num+=i; // if I is even then num=num+i

}else{

num=i; //if I odd then num= I

}

}

System.out.println(num); // print the value of num

}

}

i num

1 1

2 3

3 3

4 4+3=7

**Expected output:**

7

==========================================================================

**Snippet 6:**

import java.util.\*;

public class IncrementDecrement{

public static void main(String[] args){

int x=5;

int y=++x-x--+--x+x++;

System.out.println(y);

}

}

**Expected Output:**

8

y = 6-6+4+4 =8

In ++x I.e preincrement , x=6

X-- , postdecrement, x=6 x=5

--x, predecrement, x=4

X++, postincrement , x= 4

===============================================================================

**Snippet 7:**

import java.util.\*;

public class IncrementDecrement{

public static void main(String[] args){

int a=10;

int b=5;

int result=++a\*b-- - --a + b++;

System.out.println(result);

}

}

a b expression

10 5

11(++a) 5(b--)

4

10(--a) 4(b++) 11\*5-10+4

=55-10+4

=55-6

=**49**

**Output**:

**49**

**========================================================**

**Snippet 8:**

import java.util.\*;

public class LoopIncrement{

public static void main(String[] args){

int count=0;

for(int i=0; i<4;i++){

count+=i++ - ++i;

}

System.out.println(count);

}

}

i count expression

0 0 0+0-2= -2

2 -2 -2+2-4= -4

Output:

-4

======================================================

**SECTION 3:**

**1. Write a program to calculate the sum of the first 50 natural numbers.**

public class NaturalNumbers{

public static void main(String[] args){

int n=50;

int sum= (n\*(n+1))/2;

System.out.println("sum of the first 50 natural numbers is "+sum);

}

}

**Output**:

D:\Feb 25\Assignment\_3\_section\_3>javac NaturalNumbers.java

D:\Feb 25\Assignment\_3\_section\_3>java NaturalNumbers

**sum of the first 50 natural numbers is 1275**

**===================================================================**

1. Write a program to compute the factorial of the number 10

public class Factorial{

public static void main(String[] args){

int num=10;

long factorial =1;

for (int i=1;i<=num;i++){

factorial \*= i;

}

System.out.println("factorial of"+ num+"is: "+factorial);

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac Factorial.java

D:\Feb 25\Assignment\_3\_section\_3>java Factorial

factorial of10is: 3628800

===============================================================

1. **Write a program to print all multiples of 7 between 1 and 100**

import java.util.\*;

public class MutltiplesOfSeven{

public static void main(String[] args){

System.out.print("Multiples of Seven between 1 and 100: ");

for (int num=1;num<=100;num++){

if(num%7==0){

System.out.print(num+" ");

}

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>java MutltiplesOfSeven

Multiples of Seven between 1 and 100: 7 14 21 28 35 42 49 56 63 70 77 84 91 98

===============================================================

**5 Write a program to print the Fibonacci sequence up to the number 21.**

public class FibonacciSeries{

public static void main(String[] args){

int n=21;

int first=0, second=1;

System.out.println("Fibonacci Series upto 21 is: ");

for(int i=0;i<=8;i++){

System.out.print(first+" ");

int next=first+second;

first=second;

second=next;

}

}

}

**Output**:

D:\Feb 25\Assignment\_3\_section\_3>javac FibonacciSeries.java

D:\Feb 25\Assignment\_3\_section\_3>java FibonacciSeries

Fibonacci Series upto 21 is:

0 1 1 2 3 5 8 13 21

====================================================================

1. **Write a program to find and print the first 5 prime numbers.**

import java.util.\*;

public class PrimeNo{

public static void main(String[] args){

int primeSeries=12;

for (int i=1; i<primeSeries; i++){

boolean isPrime=true;

for(int j=2; j<i;j++){

if (i%j==0){

isPrime=false;

break;

}

}

if (isPrime && i>1){

System.out.print(i+ " ");

}

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac PrimeNo.java

D:\Feb 25\Assignment\_3\_section\_3>java PrimeNo

2 3 5 7 11

=====================================================================

1. **Write a program to calculate the sum of the digits of the number 9876. The output should be 30 (9 + 8 + 7 + 6).**

import java.util.\*;

public class Addition{

public static void main(String[] args){

int num=9876, sum=0;

while(num>0){

int digit= num%10; // 6 7 8 9

sum+= digit; //0+6=6 13 21 30

num/=10; //987 98 9

}

System.out.println(sum +"(9+8+7+6)");

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac Addition.java

D:\Feb 25\Assignment\_3\_section\_3>java Addition

30(9+8+7+6)

======================================================================

**8. Write a program to count down from 10 to 0, printing each number.**

import java.util.\*;

public class CountDown{

public static void main(String[] args){

for (int num=10;num>=0;num--){

System.out.print(num+" ");

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>java CountDown

10 9 8 7 6 5 4 3 2 1 0

====================================================================

**9. Write a program to find and print the largest digit in the number 4825.**

import java.util.\*;

public class Code10{

public static void main(String[] args){

int number=4825;

int largestdigit=0;

while(number>0){

int digit=number%10;

if(digit>largestdigit){

largestdigit=digit;

}

number/=10;

}

System.out.println("The largest digit is: "+largestdigit);

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac Code10.java

D:\Feb 25\Assignment\_3\_section\_3>java Code10

The largest digit is: 8

=====================================================================

**10. Write a program to print all even numbers between 1 and 50.**

Ans:

import java.util.\*;

public class EvenNumbers{

public static void main(String[] args){

System.out.print("Even numbers between 1 and 50: ");

for (int num=1;num<=50;num++){

if(num%2==0){

System.out.print(num+" ");

}

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac EvenNumbers.java

D:\Feb 25\Assignment\_3\_section\_3>java EvenNumbers

Even numbers between 1 and 50: 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 36 38 40 42 44 46 48 50

==================================================================

1. **Write a Java program to demonstrate the use of both pre-increment and post-decrement operators in a single expression**

import java.util.\*;

public class Demonstrate{

public static void main(String[] args){

int a=0,b=5;

int result= a++ + --b;

System.out.println("value of a after post increament: "+a); //a=1

System.out.println("Value of b after pre decrement: "+b); //b=4

System.out.println("a++ "+ "+"+"--b"+"="+result); //0=4=4

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac Demonstrate.java

D:\Feb 25\Assignment\_3\_section\_3>java Demonstrate

value of a after post increament: 1

Value of b after pre increment: 4

a++ +--b=4

**======================================================================**

**12. Write a program to draw the following pattern:**

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import java.util.\*;

public class StarPattern{

public static void main(String[] args){

for(int i=0;i<5;i++){

for(int j=0;j<4;j++){

System.out.print("\*");

}

System.out.println("\*");

}

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac StarPattern.java

D:\Feb 25\Assignment\_3\_section\_3>java StarPattern

\*\*\*\*\*

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==============================================================

13. Write a program to print the following pattern:

1

2\*2

3\*3\*3

4\*4\*4\*4

5\*5\*5\*5\*5

5\*5\*5\*5\*5

4\*4\*4\*4

3\*3\*3

2\*2

1

Program:

import java.util.\*;

public class Number11{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=1;j<=i;j++){

System.out.print(i);

if(j<i ){

System.out.print("\*");

}

}System.out.println();

}

for(int i=5; i>=1;i--){

for(int j=1;j<=i;j++){

System.out.print(i);

if(j<i ){

System.out.print("\*");

}

}System.out.println();

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac Number11.java

D:\Feb 25\Assignment\_3\_section\_3>java Number11

1

2\*2

3\*3\*3

4\*4\*4\*4

5\*5\*5\*5\*5

5\*5\*5\*5\*5

4\*4\*4\*4

3\*3\*3

2\*2

1

====================================================

14. Write a program to print the following pattern:

\*

\*\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*

import java.util.\*;

public class Number11{

public static void main(String[] args){

for(int i=1; i<=6;i++){

int star=i;

if(i>3){

star=2\*i-3;

}

for(int j=1;j<=star;j++){

System.out.print("\*");

}

System.out.println();

}

}

}

D:\Feb 25\Assignment\_3\_section\_3>javac Number11.java

D:\Feb 25\Assignment\_3\_section\_3>java Number11

\*

\*\*

\*\*\*

\*\*\*\*\*

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========================================================================

15. Write a program to print the following pattern:

\*

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\*\*\*

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\*\*\*\*\*

**Program:**

import java.util.\*;

public class StarTrianglePattern{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=1; j<=i; j++){

System.out.print("\*");

}

System.out.println();

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac StarTrianglePattern.java

D:\Feb 25\Assignment\_3\_section\_3>java StarTrianglePattern

\*

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========================================================================

16. Write a program to print the following pattern:

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*

public class StarPattern3 {

public static void main(String[] args) {

int n = 5;

for (int i = 1; i <= n; i++) {

int stars = 2 \* i - 1;

for (int j = 1; j <= stars; j++) {

System.out.print("\*");

}

System.out.println();

}

}

}

Output:

\*

\*\*\*

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\*\*\*\*\*\*\*\*\*

==========================================================================

17. Write a program to print the following pattern:

\*\*\*\*\*

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\*\*\*

\*\*

\*

**Program:**

import java.util.\*;

public class StarTrianglePattern1{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=5; j>=i; j--){

System.out.print("\*");

}

System.out.println();

}

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac StarTrianglePattern1.java

D:\Feb 25\Assignment\_3\_section\_3>java StarTrianglePattern1

\*\*\*\*\*

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\*

==============================================================================

18. Write a program to print the following pattern:

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

Program:

public class StarPattern5{

public static void main(String[] args) {

int n = 4;

for (int i = 1; i <= n; i++) {

int stars = 2 \* i - 1;

for (int j = 1; j <= stars; j++) {

System.out.print("\*");

}

System.out.println();

}

for (int i = n-1; i >=1; i--) {

int stars = 2 \* i - 1;

for (int j = 1; j <= stars; j++) {

System.out.print("\*");

}

System.out.println();

}

}

}

Output:

D:\Feb 25\Assignment\_3\_section\_3>javac StarPattern5.java

D:\Feb 25\Assignment\_3\_section\_3>java StarPattern5

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

==========================================================================

19. Write a program to print the following pattern:

1

1\*2

1\*2\*3

1\*2\*3\*4

1\*2\*3\*4\*5

import java.util.\*;

public class Number{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=1;j<=i;j++){

System.out.print(j);

if(j>=1 && i>1 && j<i ){

System.out.print("\*");

}

}System.out.println();

}

}

}

=====================================================================

20. Write a program to print the following pattern:

5

5\*4

5\*4\*3

5\*4\*3\*2

5\*4\*3\*2\*1

**Program:**

import java.util.\*;

public class NumberStar{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=5; j>=(6-i);j--){

System.out.print(j);

if (j > (6 - i)) {

System.out.print("\*");

}

}

System.out.println();

}

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac Number.java

D:\Feb 25\Assignment\_3\_section\_3>java Number

5

5\*4

5\*4\*3

5\*4\*3\*2

5\*4\*3\*2\*1

========================================================================

21. Write a program to print the following pattern:

1

1\*3

1\*3\*5

1\*3\*5\*7

1\*3\*5\*7\*9

Program:

import java.util.\*;

public class Number4{

public static void main(String[] args){

for(int i=1;i<=5;i++){

int num=1;

for(int j=1; j<=i;j++){

System.out.print(num);

num+=2;

if(j<i){

System.out.print("\*");

}

}

System.out.println();

}

}

}

D:\Feb 25\Assignment\_3\_section\_3>javac Number4.java

D:\Feb 25\Assignment\_3\_section\_3>java Number4

1

1\*3

1\*3\*5

1\*3\*5\*7

1\*3\*5\*7\*9

=============================================================================

22. Write a program to print the following pattern:

\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*

**Program**:

public class StarPattern8{

public static void main(String[] args) {

int n = 5;

for (int i = n; i >=1; i--) {

int stars = 2 \* i - 1;

for (int j = 1; j <= stars; j++) {

System.out.print("\*");

}

System.out.println();

}

for (int i = 2; i <=n; i++) {

int stars = 2 \* i - 1;

for (int j = 1; j <= stars; j++) {

System.out.print("\*");

}

System.out.println();

}

}

}

**Output**:

D:\Feb 25\Assignment\_3\_section\_3>javac StarPattern8.java

D:\Feb 25\Assignment\_3\_section\_3>java StarPattern8

\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*

==================================================================

23. Write a program to print the following pattern:

11111

22222

33333

44444

55555

Program:

import java.util.\*;

public class Pattern{

public static void main(String[] args){

for(int i=1;i<6;i++){

for(int j=1;j<5;j++){s

System.out.print(i);

}

System.out.println(i);

}

}

}

**Output:**

}

D:\Feb 25\Assignment\_3\_section\_3>javac Pattern.java

D:\Feb 25\Assignment\_3\_section\_3>java Pattern

11111

22222

33333

44444

55555

============================================================================

24. Write a program to print the following pattern:

1

22

333

4444

55555

**Program:**

import java.util.\*;

public class Number{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=1;j<=i;j++){

System.out.print(i);

}

System.out.println();

}

}

}

==========================================================================

25. Write a program to print the following pattern:

1

12

123

1234

12345

**Program:**

import java.util.\*;

public class Number{

public static void main(String[] args){

for(int i=1; i<=5;i++){

for(int j=1;j<=i;j++){

System.out.print(j);

}

System.out.println();

}

}

}

=================================================================

1. Write a program to print the following pattern:

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

**Program:**

import java.util.\*;

public class Number2{

public static void main(String[] args){

int count=0;

for(int i=1;i<=5;i++){

for(int j=1;j<=i;j++){

System.out.print(++count+" ");

}

System.out.println();

}

}

}

**Output**:

D:\Feb 25\Assignment\_3\_section\_3>javac Number2.java

D:\Feb 25\Assignment\_3\_section\_3>java Number2

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15