**Looping techniques:**

**1.Print your name 5 times.**

package com;

public class printname {

public static void main(String[] args)

{

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

{

System.*out*.println("Sahana shetty");

}

}

}

**2.Print from 1 to 10 Even numbers.**

package com;

public class evenno {

public static void main(String[] args)

{

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

{

if(i%2==0)

{

System.*out*.println(i);

}

}

}

}

**3.Print from 10 to 1 Odd Numbers.**

package com;

public class oddno {

public static void main(String[] args)

{

for(int i=10;i>=1;i--)

{

if(i%2==1)

{

System.*out*.println(i);

}

}

}

}

**4.Print sum of the first 10 natural numbers.**

package com;

public class sum {

public static void main(String[] args)

{

int sum=0;

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

{

sum=sum+i;

}

System.*out*.println("sum of 1st 10 natural no is:"+" "+sum);

}

}

**5.Print the sum of digits.**

package com;

public class sum\_of\_digit {

public static void main(String[] args)

{

int sum=0;

int n=123;

while(n!=0)

{

int i=n%10;

sum=sum+i;

n=n/10;

}

System.*out*.println("sum of digit is"+" "+sum);

}

}

**6.Print how many digits**

package com;

public class digit\_count {

public static void main(String[] args)

{

int count=0;

int n=123;

while(n!=0)

{

count++;

n=n/10;

}

System.*out*.println("digit count is"+" "+count);

}

}

**7.Print the Fibonacci series.**

package com;

import java.util.Scanner;

public class fibonacci\_series {

public static void main(String[] args)

{

Scanner sc1=new Scanner(System.*in*);

System.*out*.println("Enter the value of n");

int n=sc1.nextInt();

int a=0,b=1;

System.*out*.println("Fibonacci series upto"+" "+n+" "+"is");

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

{

System.*out*.print(a+" ");

int c=a+b;

a=b;

b=c;

}

}

}

**8.Check whether the Number is palindrome or not.**

package com;

import java.util.Scanner;

public class palindrome {

public static void main(String[] args)

{

Scanner sc1=new Scanner(System.*in*);

System.*out*.println("Enter a number");

int originalno=sc1.nextInt();

int num=originalno;

int reverse=0;

while(num!=0)

{

int m=num%10;

reverse=reverse\*10+m;

num=num/10;

}

if(originalno==reverse)

{

System.*out*.println(originalno+" "+"is palindrome");

}

else

{

System.*out*.println(originalno+" "+"is not palindrome");

}

}

}

**9.Check whether the string is palindrome or not.**

package com;

import java.util.Scanner;

public class palindrome\_string {

public static void main(String[] args)

{

Scanner sc1=new Scanner(System.*in*);

System.*out*.println("Enter a string");

String org=sc1.nextLine();

String reverse=new StringBuilder(org).reverse().toString();

if(org.equals(reverse))

{

System.*out*.println(org+" "+"is palindrome");

}

else

{

System.*out*.println(org+" "+"is not palindrome");

}

}

}

**10.Find the sum of the array**

package com;

public class sum\_of\_array {

public static void main(String[] args)

{

int arr[]= {10,20,30};

int sum=0;

for(int i=0;i<arr.length;i++)

{

sum=sum+arr[i];

}

System.*out*.println("sum of array elements is"+" "+sum);

}

}

**Recursion**

**1.Print your name 5 times.**

package com;

public class printname\_1 {

public static void print(int i) {

if (i>=5)

{

return;

}

System.*out*.println("Sahana shetty");

*print*(i + 1);

}

public static void main(String[] args) {

*print*(0);

}

}

**2.Print from 1 to 10 Even numbers.**

package com;

public class evenno\_1 {

public static void printEven(int i) {

if (i > 10)

{

return;

}

if (i % 2 == 0)

{

System.*out*.println(i);

}

*printEven*(i + 1);

}

public static void main(String[] args) {

*printEven*(1);

}

}

**3.Print from 10 to 1 Odd Numbers.**

package com;

public class oddno\_1 {

public static void printOdd(int i) {

if (i < 1)

{

return;

}

if (i % 2 == 1)

{

System.*out*.println(i);

}

*printOdd*(i - 1);

}

public static void main(String[] args) {

*printOdd*(10);

}

}

**4.Print sum of the first 10 natural numbers.**

package com;

public class sum\_1 {

public static int Sum(int n) {

if (n == 1)

{

return 1;

}

return n+*Sum*(n - 1);

}

public static void main(String[] args) {

int result=*Sum*(10);

System.*out*.println("sum of 1st 10 natural no is: " + result);

}

}

**5.Print the sum of digits.**

package com;

public class sum\_of\_digit\_1 {

public static int sum(int n) {

if (n == 0)

{

return 0;

}

return (n % 10)+*sum*(n / 10);

}

public static void main(String[] args) {

int n = 123;

int sum = *sum*(n);

System.*out*.println("sum of digit is " + sum);

}

}

**6.Print how many digits**

package com;

public class digit\_count {

public static void main(String[] args)

{

int count=0;

int n=123;

while(n!=0)

{

count++;

n=n/10;

}

System.*out*.println("digit count is"+" "+count);

}

}

**7.Print the Fibonacci series.**

package com;

import java.util.Scanner;

public class fibonacci\_series\_1 {

public static int fibonacci(int n) {

if (n == 0)

{

return 0;

}

if (n == 1)

{

return 1;

}

return *fibonacci*(n - 1) + *fibonacci*(n - 2);

}

public static void main(String[] args) {

Scanner sc1 = new Scanner(System.*in*);

System.*out*.println("Enter the value of n");

int n = sc1.nextInt();

System.*out*.println("Fibonacci series up to " + n + " terms is:");

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

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

}

}

}

**8.Check whether the Number is palindrome or not.**

package com;

import java.util.Scanner;

public class palindrome\_1 {

public static int reverse(int num, int rev)

{

if (num == 0)

{

return rev;

}

return *reverse*(num / 10, rev \* 10 + num % 10);

}

public static void main(String[] args) {

Scanner sc1 = new Scanner(System.*in*);

System.*out*.println("Enter a number");

int originalno = sc1.nextInt();

int reversed = *reverse*(originalno, 0);

if (originalno == reversed) {

System.*out*.println(originalno + " is palindrome");

} else {

System.*out*.println(originalno + " is not palindrome");

}

}

}

**9.Check whether the string is palindrome or not.**

package com;

import java.util.Scanner;

public class palindrome\_string\_1 {

public static String reverse(String str) {

if (str.isEmpty()) {

return str;

}

return *reverse*(str.substring(1)) + str.charAt(0);

}

public static void main(String[] args) {

Scanner sc1 = new Scanner(System.*in*);

System.*out*.println("Enter a string");

String org = sc1.nextLine();

String reverse = *reverse*(org);

if (org.equals(reverse)) {

System.*out*.println(org + " is palindrome");

} else {

System.*out*.println(org + " is not palindrome");

}

}

}

**10.Find the sum of the array**

package com;

public class sum\_of\_array\_1 {

public static int sum(int[] arr, int i) {

if (i==arr.length)

{

return 0;

}

return arr[i]+*sum*(arr,i+1);

}

public static void main(String[] args) {

int arr[] = {10, 20, 30};

int sum = *sum*(arr,0);

System.*out*.println("sum of array elements is " + sum);

}

}