**Numbers-4**

**Question 1:**

Report

**Marks: +10-0**

**Description:**

Write a program to find Sum of all Palindrome Numbers between the Given Numbers?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

                     Second Line of Input Consists of One Integer Value.

Output        :- Print the Sum of All Palindromes Between the Given Numbers.

Constraints  :- Either of the Given Inputs Must not equal to Zero or else Print **INVALID Inputs**.

                     If there is no Palindrome values between the Given Numbers then Print **No Palindrome Values**.

                     If Either of the Given Inputs is Negative then convert those Negative Values to Positive Values.

**Example:**

Input 1  :    100

                  200

Output 1:   1460

Input 2  :   -20

                  25

Output 2:    22

**Explanation:**

Input 1  :    100

                  200

Output 1:   1460

Explanation :

Palindromes Between 100 and 200 is **101 111 121 131 141 151 161 171 181 191**

sum = 101 + 111 + 121 + 131 + 141 + 151 + 161 + 171 + 181 + 191

       = 1460

Input 2  :   -20

                  25

Output 2:    22

Explanation :

Palindromes Between -20 and 25 is 22.

sum = 22

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

if(a==0 || b==0){

System.out.println("INVALID Inputs");

}

else{

if(a<0){

a=-a;

}

if(b<0){

b=-b;

}

int p=Math.min(a,b);

int q=Math.max(a,b);

int sum=0;

int c=0;

for(int i=p+1;i<q;i++)

{

int t=i;

int r=0;

while(t>0)

{

int d=t%10;

r=r\*10+d;

t=t/10;

}

if(r==i){

sum+=i;

c++;

}

}

if(c>0){

System.out.println(sum);

}else{

System.out.println("No Palindrome Values");

}

}

}

}

**Question 2:**

Report

**Marks: +10-0**

**Description:**

Write a program to print Alternative Palindrome Numbers in the Given Range?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

                     Second Line of Input Consists of One Integer Value.

Output        :- Print the Alternative Palindromes in a Given Range.

Constraints  :- Given Inputs Must be Greater than or equal to Zero or else Print **InvAlid InPUts**.

                     If there is no Palindrome values in a Given Range then Print **No Palindrome Values**.

**Example:**

Input 1  :    100

                  200

Output 1:

101, 121, 141, 161, 181.

Input 2  :   -33

                  20

Output 2:   InvAlid InPUts

**Explanation:**

Input 1  :    100

                  200

Output 1:

101, 121, 141, 161, 181.

Explanation :

Palindrome Numbers in a Range of 100 and 200 is 101, 111, 121, 131, 141, 151, 161, 171, 181, 191.

Alternatve Palindrome Numbers in a Rnage of 100 and 200 is 101, 121, 141, 161, 181.

Input 2  :   -33

                  20

Output 2:    InvAlid InPUts

Explanation :

The Given Numbers are not Positive So print InvAlid InPUts.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

if(a<0 || b<0)

{

System.out.print("InvAlid InPUts");

}

else{

if(a>b){

int temp=a;

a=b;

b=temp;

}

int count=0;

int p=0;

for(int i=a;i<=b;i++)

{

int n=i;

int rev=0;

int t=n;

while(t!=0)

{

int d=t%10;

rev=rev\*10+d;

t=t/10;

}

if(rev==n){

if(count%2==0){

if(p!=0){

System.out.print(", ");

}System.out.print(n);

p++;

}

count++;

}

}

if(p>0){

System.out.print(".");

}

else

{

System.out.print("No Palindrome Values");

}

}

}

}

**Question 3:**

Report

**Marks: +10-0**

**Description:**

Write a program to print Sum of all Alternative Palindrome Numbers Between the Given Numbers?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

                     Second Line of Input Consists of One Integer Value.

Output        :- Print the Sum of All Alternative Palindromes Between the Given Numbers.

Constraints  :- Either of the Given Inputs is equal to Zero then Print **Invalid Inputs**.

                     If there is no Palindrome values between the Given Numbers then Print **No Palindrome Values**.

                     If Either of the Given Inputs is Negative then convert those Negative Values to Positive Values.

**Example:**

Input 1  :    100

                  200

Output 1:    Sum of Alternative Palindrome Numbers between the 100 and 200 is 101 + 121 + 141 + 161 + 181 = 705.

Input 2  :   -200

                  25

Output 2:    Sum of Alternative Palindrome Numbers between the 25 and 200 is 33 + 55 + 77 + 99 + 111 + 131 + 151 + 171 + 191 = 1019.

**Explanation:**

Input 1  :    100

                  200

Output 1:    Sum of Alternative Palindrome Numbers between the 100 and 200 is 101 + 121 + 141 + 161 + 181 = 705

Explanation :

Palindromes Between 100 and 200 is 101 111 121 131 141 151 161 171 181 191

Alternative Palindromes Between 100 and 200 is 101 121 141 161 181

sum = 101 + 121 + 141 + 161 + 181

       = 705

Input 2  :   -200

                  25

Output 2:    Sum of Alternative Palindrome Numbers between the 25 and 200 is 33 + 55 + 77 + 99 + 111 + 131 + 151 + 171 + 191 = 1019.

Explanation :

Palindromes Between 25 and 200 is 33 44 55 66 77 88 99 101 111 121 131 141 151 161 171 181 191.

Alternative Palindromes Between 25 and 200 is 33 55 77 99 111 131 151 171 191.

sum = 33 + 55 + 77 + 99 + 111 + 131 + 151 + 171 + 191

       = 1019

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int num1=sc.nextInt();

int num2=sc.nextInt();

if(num1<0)num1=-num1;

if(num2<0)num2=-num2;

if(num1==0 || num2==0)

{

System.out.println("Invalid Inputs");

return;

}

int start=num1;

int end=num2;

if(num1>num2)

{

start=num2;

end=num1;

}

int count=0;

int sum=0;

int index=0;

String output="";

for(int i=start+1;i<end;i++)

{

int original=i;

int reversed=0;

int temp=i;

while(temp>0)

{

int digit=temp%10;

reversed=reversed\*10+digit;

temp=temp/10;

}

if(original==reversed)

{

if(index%2==0)

{

sum=sum+original;

if(count>0){

output=output+" + ";

}

output=output+original;

count++;

}

index=index+1;

}

}

if(count==0)

{

System.out.print("No Palindrome Values");

}

else{

System.out.println("Sum of Alternative Palindrome Numbers between the "+start+" and "+end+" is "+output+" = "+sum+".");

}

}

}

**Question 4:**

Report

**Marks: +10-0**

**Description:**

Write a program to the Given Number is Palindrome or not if it is palindrome then Print **PALINDROME** else Print **Reverse Value of a Given Number** ?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

Output        :- Print the Palindrome or Reverse value.

Constraints  :- Given Input is Must be Greater than or equal to Zero or else Print **Invalid Input**.

                     If the Given Number is Zero then Print **Zero**.

**Example:**

Input 1  :    1698

Output 1:    Reverse of a Given Number is 8961

Input 2  :   2112

Output 2:   Given Number is Palindrome

**Explanation:**

Input 1  :    1698

Output 1:    Reverse of a Given Number is 8961

Explanation :

If u reverse the Given Number (1698) then the value is 8961

Now Check the Given Number is equal to Reverse of Given Number

1698 is not Equal to 8961 it means both are not Same, So Print Reverse value of Given Number --> 8961.

Input 2  :   2112

Output 2:   Given Number is Palindrome

Explanation :

If u reverse the Given Number (2112) then the value is 2112

Now Check the Given Number is equal to Reverse of Given Number

2112 is Equal to 2112 it means both are Same, So Print Palindrome.

**Your Code: java**

import java.util.Scanner;

class Main

{

static Scanner sc=new Scanner(System.in);

public static void main(String []args)

{

int n=sc.nextInt();

if(n<0){

System.out.println("Invalid Input");

}

else if(n==0)

{

System.out.print("Zero");

}

else{

int rev=0,temp=n;

while(n!=0){

int r=n%10;

rev=rev\*10+r;

n=n/10;

}

if(rev==temp){

System.out.println("Given Number is Palindrome");

}

else{

System.out.print("Reverse of a Given Number is "+rev);

}

}

}

}

**Question 5:**

Report

**Marks: +10-0**

**Description:**

Write a Program to print the first 50 prime Numbers without using Factors count?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( N ) .

Output        :- Print First N no of Prime Numbers.

Constraints  :- Given Input Must be Greater than Zero or else Print **"Invalid Input"**.

**Example:**

Input 1  :    16

Output 1:    2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53

Input 2  :    -6

Output 2:     Invalid Input

Input 3  :    25

Output 3:    2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97

**Explanation:**

Na

**Your Code: java**

import java.util.Scanner;

class NPrimeNumbers{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0){

System.out.println("Invalid Input");

}

else{

int count=0;

int a=2;

while(count<n)

{

int i=2;

while(i\*i<=a)

{

if(a%i==0){

break;

}

i++;

}

if(i\*i>a){

System.out.print(a);

count++;

if(count<n){

System.out.print(", ");

}

}

a++;

}

}

}

}

**Question 6:**

Report

**Marks: +10-0**

**Description:**

Write a program to print all Palindrome Numbers between the Given Numbers?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

                     Second Line of Input Consists of One Integer Value.

Output        :- Print the All Palindromes Between the Given Numbers.

Constraints  :- Given Inputs Must be Greater than or equal to Zero or else Print **InvaliD InputS**.

                     If there is no Palindrome values between the Given Numbers then Print **No Palindrome Values**.

                     if starting range is greater than ending range swap the inputs and print all palindromes in the range

**Example:**

Input 1  :    100

                  200

Output 1:

101

111

121

131

141

151

161

171

181

191

Input 2  :   -20

                  20

Output 2:    InvaliD InputS

**Explanation:**

Input 1  :    100

                  200

Output 1:

101

111

121

131

141

151

161

171

181

191

Explanation :

Palindrome Numbers Between 100 and 200 is **101 111 121 131 141 151 161 171 181 191**

Input 2  :   -20

                  20

Output 2:    InvaliD InputS

Explanation :

The Given Numbers are not Positive So print **InvaliD InputS**.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

int count=0;

if(a<0 || b<0)

{

System.out.println("InvaliD InputS");

}

else{

if(a>b){

a=a+b-(b=a);

}

for(int i=a+1;i<b;i++)

{

int n=i;

int rev=0;

int temp=n;

while(temp!=0)

{

int d=temp%10;

rev=rev\*10+d;

temp/=10;

}

if(rev==i)

{

System.out.println(rev);

count++;

}

}

if(count==0)

{

System.out.println("No Palindrome Values");

}

}

}

}

**Question 7:**

Report

**Marks: +10-0**

**Description:**

Write a program to find Average of all Palindrome Numbers between the Range?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

                     Second Line of Input Consists of One Integer Value.

Output        :- Print the Average of All Palindromes Between the Given Range.

Constraints  :- Either of the Given Inputs Must not equal to Zero or else Print **INVALID Inputs**.

                     If there is no Palindrome values between the Given Range then Print **No Palindrome Values**.

                     If Either of the Given Inputs is Negative then convert those Negative Values to Positive Values.

                     If the First Input is Greater then Second Input then Print **Given Inputs are Swapped**.

**Example:**

Input 1  :    100

                  120

Output 1:    106.00

Input 2  :   -20

                  45

Output 2:    33.00

**Explanation:**

Input 1  :    100

                  120

Output 1:    106

Explanation :

Palindromes Between 100 and 120 is **101 111**

sum = 101 + 111

       = 212

Average = sum / 2

            = 212 / 2

            = 106

Input 2  :   -20

                  45

Output 2:    33

Explanation :

Palindromes Between -20 and 45 is 22 33 44

sum = 22 + 33 + 44

       = 99

Average = sum / 3

            = 99 / 3

            = 33

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

int sum =0;

int c=0;

if(a==0 || b==0)

{

System.out.print("INVALID Inputs");

return;

}

else{

if(a<0){

a=-a;

}

if(b<0)

{

b=-b;

}

if(a>b){

System.out.println("Given Inputs are Swapped");

}

else{

for(int i=a;i<=b;i++){

int n=i;

int rev=0;

int t=n;

while(t!=0){

int d=t%10;

rev=rev\*10+d;

t=t/10;

}

if(n==rev){

sum=sum+n;

c++;

}

}

if(c>0){

System.out.printf("%.2f",(float)sum/c);

}

else{

System.out.println("No Palindrome Values");

}

}

}

}

}

**Question 8:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Given Number is Prime or not without using count?

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

Output        :- Print the Prime Number or Not a Prime Number.

Constraints  :- Given Input Must be Greater than Zero or else Print **"Invalid Input"**.

**Example:**

Input 1  :    83

Output 1:    Prime Number

Input 2  :    -6

Output 2:     Invalid Input

Input 3  :    182

Output 3:    Not a Prime Number

**Explanation:**

NA

**Your Code: java**

import java.util.Scanner;

class PrimeCheck{

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid Input");

}

else if(n==0 || n==1)

{

System.out.print("Not a Prime Number");

}

else{

boolean isPrime=true;

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

if(n%i==0)

{

isPrime=false;

break;

}

}

if(isPrime){

System.out.print("Prime Number");

}else{

System.out.println("Not a Prime Number");

}

}

}

}

**Question 9:**

Report

**Marks: +10-0**

**Description:**

Write a program to check Given Number is Palindrome or Not.

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

Output        :- Print the Given Number **Palindrome** or **Not a Palindrome**.

Constraints  :- Given Input Must be Greater than Zero or else Print **InvAlid Input**.

**Example:**

Input 1  :    1698

Output 1:    Not a Palindrome

Input 2  :   2112

Output 2:   Palindrome

**Explanation:**

Input 1  :    1698

Output 1:    Not a Palindrome

Explanation :

If u reverse the Given Number (1698) then the value is 8961

Now Check the Given Number is equal to Reverse of Given Number

1698 is not Equal to 8961 it means both are not Same, So Print Not a Palindrome.

Input 2  :   2112

Output 2:   Palindrome

Explanation :

If u reverse the Given Number (2112) then the value is 2112

Now Check the Given Number is equal to Reverse of Given Number

2112 is Equal to 2112 it means both are Same, So Print Palindrome.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int rev=0;

int temp=n;

if(n>0)

{

while(n!=0)

{

int r=n%10;

rev=rev\*10+r;

n=n/10;

}

if(temp==rev)

{

System.out.print("Palindrome");

}

else{

System.out.print("Not a Palindrome");

}

}

else

{

System.out.print("InvAlid Input");;

}

}

}

**Question 10:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the numbers in the following format  -   n3,...........64,27,8,1.

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value.

Output        :- Print the Following Format.

Constraints  :- Given Input is equal to Zero then Print **"Invalid Input."**.

**Example:**

Input 1  :    9

Output 1:    729, 512, 343, 216, 125, 64, 27, 8, 1.

Input 2  :   -11

Output 2:    1331, 1000, 729, 512, 343, 216, 125, 64, 27, 8, 1.

Input 3  :    5

Output 3:    125, 64, 27, 8, 1.

**Explanation:**

Print following Output for respective input.

**Your Code: java**

import java.util.Scanner;

class Num{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n==0){

System.out.print("Invalid Input.");

return;

}

n=Math.abs(n);

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

{

System.out.print((int)Math.pow(i,3));

if(i!=1)

{

System.out.print(", ");

}

else{

System.out.print(".");

}

}

}

}