**PROGRAM 1**

**// program to print a contant using printf & puts**

#include <stdio.h>

int main()

{

puts("Name - Harshandeep Singh\nBranch - EEA1\nRoll no.- 2016029");

return 0;

}

**OUTPUT**

Name - Harshandeep Singh

Branch - EEA1

Roll no.- 2016029

**PROGRAM 2**

**// program to use different data types (int,char,float)**

#include <stdio.h>

int main()

{

int x,y,sum;

float a,b,c;

char h;

printf("enter value of x and y:\n");

scanf("%d %d",&x,&y);

sum=x+y;

printf("\naddition of numbers is:\n %d+%d=%d",x,y,sum);

printf("\nenter value of a and b:");

scanf("%f %f",&a,&b);

c=a+b;

printf("sum of float values = %.2f",c);

return 0;

}

**OUTPUT**

enter value of x and y:

2

3

addition of numbers is:

2+3=5

enter value of a and b:6

7

sum of float values = 13.00

**PROGRAM 3**

**// program to use arthmatic operators**

#include <stdio.h>

int main()

{

int x=10 , y=10,z;

z=x+y;

printf("x+y= %d\n",z);

z=x-y;

printf("x-y= %d\n",z);

z=x\*y;

printf("x\*y= %d\n",z);

z=x/y;

printf("x/y= %d\n",z);

z=x%y;

printf("x%y= %d\n",z);

return 0;

}

**OUTPUT**

x+y= 20

x-y= 0

x\*y= 100

x/y= 1

x%y= 0

**PROGRAM 4**

**// program to use logical operators**

#include <stdio.h>

int main()

{

int a = 10, b = 10, c =5, result;

result = (a == b) && (c > b);

printf("(a == b) && (c > b) is %d \n", result);

result = (a == b) && (c < b);

printf("(a == b) && (c < b) is %d \n", result);

result = (a == b) || (c < b);

printf("(a == b) || (c < b) is %d \n", result);

result = (a != b) || (c < b);

printf("(a != b) || (c < b) is %d \n", result);

result = !(a != b);

printf("!(a != b) is %d \n", result);

result = !(a == b);

printf("!(a == b) is %d \n", result);

return 0;

}

**OUTPUT**

(a == b) && (c > b) is 0

(a == b) && (c < b) is 1

(a == b) || (c < b) is 1

(a != b) || (c < b) is 1

!(a != b) is 1

!(a == b) is 0

**PROGRAM 5**

**// program to use relational operators**

#include <stdio.h>

int main()

{

int a = 10, b = 20;

printf("%d == %d is %d \n", a, b, a == b);

printf("%d > %d is %d \n", a, b, a > b);

printf("%d < %d is %d \n", a, b, a < b);

printf("%d != %d is %d \n", a, b, a != b);

printf("%d >= %d is %d \n", a, b, a >= b);

printf("%d <= %d is %d \n", a, b, a <= b);

return 0;

}

**OUTPUT**

10 == 20 is 0

10 > 20 is 0

10 < 20 is 1

10 != 20 is 1

10 >= 20 is 0

10 <= 20 is 1

**PROGRAM 6**

**// program to use icrement and decrement operators**

#include <stdio.h>

int main()

{

int a = 5, b = 10;

int c = 25, d =15 ;

printf("++a = %d \n", ++a);

printf("--b = %d \n", --b);

printf("++c = %d \n", ++c);

printf("--d = %d \n", --d);

return 0;

}

**OUTPUT**

++a = 6

--b = 9

++c = 26

--d = 14

**PROGRAM 7**

**// program to use conditional statements: if- else, if- else ladder**

#include <stdio.h>

int main()

{

**// if- else**

int a;

printf("Enter an integer: ");

scanf("%d ", &a);

if (a%2 == 0) {

printf("%d is a even.",a);

}

else

{

printf("%d is odd .",a);

}

return 0;

}

**OUTPUT**

Enter an integer: 9

9 is odd .

#include <stdio.h>

int main()

{

**// if- else ladder**

int a, b;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

if (a == b) {

printf("outcome:%d=%d.",a,b);

}

else if (a>b)

{

printf("outcome: %d>%d .",a,b);

}

else

{

printf("outcome:%d<%d ",a,b);

}

return 0;

}

**OUTPUT**

Enter two numbers: 9

3

outcome: 9>3 .

**PROGRAM 8**

**// program to use for while loop, do loop**

#include <stdio.h>

int main()

{

int i = 0; **// while loop**

while (i <= 100)

{

printf("%d\n", i);

i++;

}

return 0;

}

**OUTPUT**

0

1

2

3

4

5

6

**// program to use for while loop, do loop**

#include <stdio.h>

int main()

{

double number, sum = 0;

**// DO WHILE**

do

{

printf("Enter a number: ");

scanf("%lf", &number);

sum += number;

}

while(number != 0.0);

printf("Sum = %.2lf",sum);

return 0;

}

**PROGRAM 9**

**// PROGRAM TO USE SWITCH STATEMENT**

#include <stdio.h>

int main()

{

int num=2;

switch(num+2)

{

case 1:

printf("Case1: Value is: %d", num);

case 2:

printf("Case1: Value is: %d", num);

case 3:

printf("Case1: Value is: %d", num);

default:

printf("Default: Value is: %d", num);

}

return 0;

}

**PROGRAM 11**

**// PROGRAM TO IMPLEMENT AND USE FUNCTION**

#include<stdio.h>

float square ( float x );

int main( )

{

float m, n ;

printf ( "\nEnter some number for finding square \n");

scanf ( "%f", &m ) ;

// function call

n = square ( m ) ;

printf ( "\nSquare of the given number %f is %f",m,n );

}

float square ( float x ) // function definition

{

float p ;

p = x \* x ;

return ( p ) ;

}

**OUTPUT**

Enter some number for finding square

2

Square of the given number 2.000000 is 4.000000

**PROGRAM 12**

**// PROGRAM TO USE ARRAYS**

**// Print the elements stored in the array**

#include <stdio.h>

int main() {

int values[5];

printf("Enter 5 integers: ");

// taking input and storing it in an array

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

scanf("%d", &values[i]);

}

printf("Displaying integers: ");

// printing elements of an array

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

printf("%d\n", values[i]);

}

return 0;

}

**OUTPUT**

Enter 5 integers: 3

6

5

8

6

Displaying integers: 3

6

5

8

6

**PROGRAM 13**

**//PROGRAM TO USE STRUCTURES**

#include <stdio.h>

struct student {

char firstName[50];

int roll;

float marks;

} s[10];

int main() {

int i;

printf("Enter information of students:\n");

// storing information

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

s[i].roll = i + 1;

printf("\nFor roll number%d,\n", s[i].roll);

printf("Enter first name: ");

scanf("%s", s[i].firstName);

printf("Enter marks: ");

scanf("%f", &s[i].marks);

}

printf("Displaying Information:\n\n");

// displaying information

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

printf("\nRoll number: %d\n", i + 1);

printf("First name: ");

puts(s[i].firstName);

printf("Marks: %.1f", s[i].marks);

printf("\n");

}

return 0;

}

**PROGRAM 10**

**// PROGRAM TO USE FOR LOOP, NESTED FOR LOOP**

#include<stdio.h>

int main()

{

int n, sum=0;

printf("Enter n value: ");

scanf("%d", &n);

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

{

sum += (i\*i);

}

printf("Sum of squares of first %d natural numbers = %d",

n, sum);

return 0;

}

**OUTPUT**

Enter n value: 2

Sum of squares of first 2 natural numbers = 5