**Control Statement**

Example 01: **Program to check leap year using if…else**

#include <stdio.h>

int main()

{

int year;

printf("Enter a year to check a leap year: ");

scanf("%d",&year);

if(year%400==0 && year%100!=0 || year%4==0){

printf("\n%d is the leap year.",year);

}

else {

printf("\n%d is not a leap year.",year);

}

return 0;

}

||-logical OR

!-logical NOT

Enter a year to check a leap year: 2014

2014 is not a leap year.

Example 02: **Program to define your age using else…if**

#include <stdio.h>

int main()

{

int age;

printf("Enter your age: ");

scanf("%d",&age);

if(age>=1 && age<13){

printf("\nYou are child .");

}

else if(age>12 && age<=19){

printf("\nYou are teen ager .");

}

else if(age>19 && age<=40){

printf("You are young.");

}

else if(age>40 && age<=100){

printf("\nYou are old.");

}

else{

printf("\nInvalid input. Your age must be 0 to 100");

}

return 0;

}

Enter your age: 19

You are teen ager .

Example 03: **Program to find the grade and point using else…if**

#include <stdio.h>

int main()

{

int number;

printf("Enter your number: ");

scanf("%d",&number);

if(number>=0 && number<=39){

printf("You are fail and your point is 0.00");

}

else if(number>39 && number <=44){

printf("Your grade is D and your point is 2.00");

}

else if(number>44 && number<=49){

printf("Your grade is C and your point is 2.25");

}

else if(number>49 && number<=54){

printf("Your grade is C+ and your point is 2.50");

}

else if(number>54 && number<=59){

printf("Your grade is B- and your point is 2.75");

}

else if(number>59 && number<=64){

printf("Your grade is B and your point is 3.00");

}

else if(number>64 && number<=69){

printf("Your grade is B+ and your point is 3.25");

}

else if(number>69 && number<=74){

printf("Your grade is A- and your point is 3.50");

}

else if(number>74 && number<=79){

printf("Your grade is A and your point is 3.75");

}

else if(number>79 && number<=100){

printf("Your grade is A+ and your point is 4.00");

}

else{

printf("\aSorry!!! Invalid Input . Your number should be 0 to 100.");

}

return 0;

}

Enter your number: 99

Your grade is A+ and your point is 4.00

Example 04: **Program to check capital letter or small letter using else…if**

#include <stdio.h>

int main()

{

char ch;

printf("Enter a character: ");

scanf("%c",&ch);

if(ch>='A' && ch<='Z'){

printf("%c is capital letter",ch);

}

else if(ch>='a' && ch<='z'){

printf("%c is small letter",ch);

}

else

{

printf("Not valid input. You should enter a character.");

}

return 0;

}

Enter a character:A

A is capital letter

Example 05: **Program to check positive and negative number using else…if**

#include <stdio.h>

int main()

{

int num;

printf("Enter an integer: ");

scanf("%d",&num);

if(num>0){

printf("%d is a positive number.",num);

}

else{

printf("%d is a negative number.",num);

}

return 0;

}

Enter an integer: 8

8 is positive number.

Example 06: **Program to check addition ans. right or wrong using else…if**

#include <stdio.h>

int main()

{

int ans;

printf("What is 10+12?\n");

scanf("%d",&ans);

if(ans==10+12){

printf("Right");

}

else{

printf("Wrong");

}

return 0;

}

What is 10+12?

22

Right

Example 07: **Program to to convert meter to feet or feet to meter depends on request using else…if**

#include <stdio.h>

int main()

{

int choice;

float value;

printf("Enter a value: ");

scanf("%f",&value);

printf("1.Feet to Meters \n2.Meters to Feet\n");

printf("Enter choice :");

scanf("%d",&choice);

if(choice==1){

printf("%f",value/3.28);

}

else if(choice==2){

printf("%f",value\*3.28);

}

else{

printf("Invalid choice");

}

return 0;

}

Enter a value:1

1.Feet to Meters

2.Meters to Feet

Enter choice :1

0.304878

Example 08: **Program to divided second by first where division by zero is undefined using if**

#include <stdio.h>

int main()

{

int num1,num2;

printf("Enter first number: ");

scanf("%d",&num1);

printf("Enter second number: ");

scanf("%d",&num2);

if(num2==0){

printf("Can't divide by zero.");

}

else{

printf("Answer is =%d",num1/num2);

}

return 0;

}

Enter first number: 8

Enter second number: 2

Answer is =4

Example 09: **Program to convert number system using switch case**

#include <stdio.h>

int main()

{

int choice,value;

printf("Convert\n");

printf("\t1: Decimal to Octal\n");

printf("\t2: Decimal to Hexadecimal\n");

printf("\t3: Octal to Decimal\n");

printf("\t4: Ocatal to Hexadecimal\n");

printf("\t5: Hexadecimal to Decimal\n");

printf("\t6: Hexadecimal to Octal\n");

printf("\t7: Exit\n");

printf("Enter your choice between (1-7)\n");

scanf("%d",&choice);

switch(choice){

case 1:

printf("Enter a decimal value =");

scanf("%d",&value);

printf("decimal %d=%o in octal",value,value);

break;

case 2:

printf("Enter a decimal value =");

scanf("%d",&value);

printf("decimal %d=%x in hexadecimal",value,value);

break;

case 3:

printf("Enter a octal value =");

scanf("%o",&value);

printf("octal %o=%d in decimal",value,value);

break;

case 4:

printf("Enter a octal value =");

scanf("%o",&value);

printf("octal %o=%x in hexadecimal",value,value);

break;

case 5:

printf("Enter a hexadecimal value =");

scanf("%x",&value);

printf("hexadecimal %x=%d in decimal",value,value);

break;

case 6:

printf("Enter a hexadecimal value =");

scanf("%x",&value);

printf("hexadecimal %x=%o in octal",value,value);

break;

case 7:

printf("press any key to exit");

break;

default:

printf("Invalid Input");

}

return 0;

}

Convert

1: Decimal to Octal

2: Decimal to Hexadecimal

3: Octal to Decimal

4: Ocatal to Hexadecimal

5: Hexadecimal to Decimal

6: Hexadecimal to Octal

7: Exit

Enter your choice between (1-7)

1

Enter a decimal value =10

decimal 10=12 in octal

Example 10: **Program to chose option then purpose action using if**

#include <stdio.h>

int main()

{

int x,y;

char ch;

printf("Enter the option: ");

scanf("%c",&ch);

printf("Enter 1st value :");

scanf("%d",&x);

printf("Enter 2nd value :");

scanf("%d",&y);

if (ch=='a' || ch=='A'){

printf("%d",x+y);

}

else{

printf("%d",x-y);

}

return 0;

}

Enter the option: A

Enter 1st value :8

Enter 2nd value :7

15

Example 11: **Program to choose option then purpose action using switch case**

#include <stdio.h>

int main()

{

char ch;

printf("Enter r or g.\n");

scanf("%c",&ch);

switch(ch)

{

case 'r':

case 'R':

printf("RED");

break;

case 'g':

case'G':

printf("GREEN");

break;

default:

printf("Black");

break;

}

return 0;

}

Enter r or g.

g

GREEN

Example 12: **Program to choose option then purpose action using switch case**

#include <stdio.h>

int main()

{

int x,y;

char ch;

printf("Enter the option: ");

scanf("%c",&ch);

printf("Enter 1st value :");

scanf("%d",&x);

printf("Enter 2nd value :");

scanf("%d",&y);

switch(ch)

{

case 'a':

case 'A':

printf("%d",x+y);

break;

default:

printf("%d",x-y);

break;

}

return 0;

}

Enter the option: A

Enter 1st value :7

Enter 2nd value :8

15

Example 13: **Program to temp. conversion using switch case**

#include <stdio.h>

int main()

{

int choice;

float value1;

printf("1.Celsius to Fahrenheit \n2.Fahrenheit to Celsius\n");

printf("Enter choice :");

scanf("%d",&choice);

printf("Enter a temp.: ");

scanf("%f",&value1);

switch(choice)

{

case 1:

printf("%f in Fahrenheit temp. is %f",value1,value1\*1.8+32);

break;

case 2:

printf("%f in Celsius temp. is %f",value1,(value1-32)\*0.5555);

break;

default:

printf("Invalid Input");

break;

}

return 0;

}

1.Celsius to Fahrenheit

2.Fahrenheit to Celsius

Enter choice :1

Enter a temp.: 36.9

36.900002 in Fahrenheit temp. is 98.420003

Example 14: **FOR LOOP TO FIND THE NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N;

printf("Enter a positive intejer :");

scanf("%d",&N);

for(i=1;i<=N;i++)

{

printf("%d ",i);

}

return 0;

}

Enter a positive integer: 10

1 2 3 4 5 6 7 8 9 10

Example 15: **FOR LOOP TO FIND THE ODD NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N;

printf("Enter a positive integer :");

scanf("%d",&N);

for(i=1;i<=N;i=i+2)

{

printf("%d ",i);

}

return 0;

}

Enter a positive integer :10

1 3 5 7 9

Example 3: **FOR LOOP TO FIND THE EVEN NUMBER SERIES**

Example 16: **FOR LOOP TO FIND THE EVEN NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N;

printf("Enter a positive intejer :");

scanf("%d",&N);

for(i=2;i<=N;i=i+2)

{

printf("%d ",i);

}

return 0;

}

**Enter a positive intejer :10**

**2 4 6 8 10**

Example 17: **FOR LOOP TO FIND THE SUM OF EVEN NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N,sum=0;

printf("Enter a positive integer :");

scanf("%d",&N);

printf("\n2+4+6+.......+%d = ",N);

for(i=2;i<=N;i=i+2)

{

sum=sum+i;

}

printf("%d ",sum);

return 0;

}

**Enter a positive integer :8**

**2+4+6+…+8=20**

Example 18: **FOR LOOP TO FIND THE SUM OF NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N,sum=0;

printf("Enter a positive intejer :");

scanf("%d",&N);

printf("\n1+2+3+.......+%d = ",N);

for(i=1;i<=N;i=i+1)

{

sum=sum+i;

}

printf("%d ",sum);

return 0;

}

Enter a positive intejer :100

1+2+3+.......+10 =5050

Example 19: **FOR LOOP TO FIND THE SUM OF 2N+1 NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N,sum=0;

printf("Enter a positive intejer :");

scanf("%d",&N);

printf("\n1+3+5+.......+%d = ",(2\*N+1));

for(i=1;i<=(2\*N+1);i=i+2)

{

sum=sum+i;

}

printf("%d ",sum);

return 0;

}

Enter a positive intejer :4

1+3+5+.......+9 =25

Example 20: **FOR LOOP TO 1 3 6 10 15 21 28 NUMBER SERIES**

#include <stdio.h>

int main()

{

int i,N,sum=0;

printf("Enter a positive integer :");

scanf("%d",&N);

for(i=1;i<=N;i++)

{

sum=sum+i;

printf("%d ",sum);

}

printf(".......");

return 0;

}

Enter a positive integer :10

1 3 6 10 15 21 28 36 45 55 …………

Example 21: **TAKES 3 INPUR AND PRINT LARGEST USING ELSE…IF**

#include <stdio.h>

int main()

{

float a,b,c;

printf("Enter 1st value :\n");

scanf("%f",&a);

printf("Enter 2nd value :\n");

scanf("%f",&b);

printf("Enter 3rd value :\n");

scanf("%f",&c);

if(a>=b && a>=c){

printf("%f",a);

}

else if(b>=a && b>=c){

printf("%f",b);

}

else{

printf("%f",c);

}

return 0;

}

Enter 1st value :2

Enter 2nd value :6.00

Enter 3rd value :8.23

8.230000

Example 22: **PROGRAMM TO CHECK EVEN OR ODD USING IF…ELSE**

#include <stdio.h>

int main()

{

int num;

printf("Enter an integer you want to check: ");

scanf("%d",&num);

if((num%2)==0)

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

else

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

return 0;

}

Enter an integer you want to check: 4

4 is even

Example 23: **PROGRAMM TO PRIME NUMBER SERIES USING NESTED FOR LOOP**

#include <stdio.h>

int main()

{

int i,j,N;

printf("Enter the highest range :");

scanf("%d",&N);

printf("Series of prime number up to %d is :\n",N);

for(i=2;i<=N;i++){

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

if(i%j==0)

break;

}

if(i==j)

printf("%d ",i);

}

return 0;

}

Enter the highest range :25

Series of prime number upto 25 is :

2 3 5 7 11 13 17 19 23

Example 24: **PROGRAMM TO USING NESTED FOR LOOP**

#include <stdio.h>

int main()

{

int i,j;

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

{

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

{

printf("%d",j);

}

printf("\n");

}

return 0;

}

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

Example 25: **PROGRAMM TO USING NESTED FOR LOOP**

#include <stdio.h>

int main ()

{

int i, j;

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

for (j=1;j<=3;j++){

printf("%d ", j);

}

printf("\n");

}

return 0;

}

1 2 3

1 2 3

Example 26: **PROGRAMM TO NUMBER SERIES USING WHILE LOOP**

#include <stdio.h>

int main()

{

int i=1,N;

printf("Enter a positive integer :");

scanf("%d",&N);

printf("Here is the given number series :\n");

while(i<=N){

printf("%d ",i);

i++;

}

return 0;

}

Enter a positive integer :10

Here is the given number series :

1 2 3 4 5 6 7 8 9 10