**ASSIGNMENT 3 SOLUTION**

Ans 1.

#include <stdio.h>

void main()

{

int num;

printf("Input a number :");

scanf("%d", &num);

if (num >= 0)

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

else

printf("%d is a non-positive number \n", num);

}

Ans 2.

#include <stdio.h>

int main() {

// Write C code here

int num;

// Asking for Input

printf("Enter an number: ");

scanf("%d", &num);

if ((num % 5 == 0)){

printf("%d is divisible by 5.", num);

}

else{

printf("%d is not divisible by 5.", num);

}

return 0;

}

Ans 3.

#include<stdio.h>

int main()

{

int num;

scanf("%d",&num);

**if**(num % **2** == **0**)

printf("Even");

**else**

printf("Odd");

**return** **0**;

}

Ans 4.

#include <stdio.h>

int main() {

// Write C code here

int number;

printf("Enter a number to check even or odd:");

scanf("%d", &number);

if((number & 1)==0)

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

else

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

return 0;

}

Ans 5.

#include<stdio.h>

int main()

{

int num;

printf("Enter a number:");

scanf("%d"&num);

if(num>99 && num<1000)

{

printf("%d is a 3 digit number",num);

}

else

{

printf("%d is not a 3 digit number",num);

}

return 0;

}

Ans 6.

#include <stdio.h>

int main() {

// Write C code here

int num1, num2;

// Ask user to enter the two numbers

printf("Please Enter Two different values\n");

// Read two numbers from the user

scanf("%d %d", &num1, &num2);

if(num1 > num2)

{

printf("%d is Largest\n", num1);

}

else if (num2 > num1)

{

printf("%d is Largest\n", num2);

}

else

{

printf("Both are Equal\n");

}

return 0;

}

Ans 7.

// Online C compiler to run C program online

#include<stdio.h>

#include<math.h> // it is used for math calculation

//#include<conio.h>

void main()

{

float x, y, z, det, root1, root2, real, img;

printf("\n Enter the value of coefficient x, y and z: \n ");

scanf("%f %f %f", &x, &y, &z);

// define the quadratic formula of the nature of the root

det = y \* y - 4 \* x \* z;

// defines the conditions for real and different roots of the quadratic equation

if (det > 0)

{

root1 = (-y + sqrt(det)) / (2 \* x);

root2 = (-y + sqrt(det)) / (2 \* x);

printf("\n Value of root1 = %.2f and value of root2 = %.2f", root1, root2);

}

// elseif condition defines both roots ( real and equal root) are equal in the quadratic equation

else if (det == 0)

{

root1 = root2 = -y / (2 \* x); // both roots are equal;

printf("\n Value of root1 = %.2f and Value of root2 = %.2f", root1, root2);

}

// if det < 0, means both roots are real and imaginary in the quadratic equation.

else {

real = -y / (2 \* x);

img = sqrt(-det) / (2 \* x);

printf("\n value of root1 = %.2f + %.2fi and value of root2 = %.2f - %.2fi ", real, img, real, img);

}

return 0;

}

Ans 8.

// Online C compiler to run C program online

#include <stdio.h>

int main() {

// Write C code here

int year;

printf("Enter a year: ");

scanf("%d", &year);

// leap year if perfectly divisible by 400

if (year % 400 == 0) {

printf("%d is a leap year.", year);

}

// not a leap year if divisible by 100

// but not divisible by 400

else if (year % 100 == 0) {

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

}

// leap year if not divisible by 100

// but divisible by 4

else if (year % 4 == 0) {

printf("%d is a leap year.", year);

}

// all other years are not leap years

else {

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

}

return 0;

}

Ans 9.

// Online C compiler to run C program online

#include <stdio.h>

int main() {

// Write C code here

double n1, n2, n3;

printf("Enter three different numbers: ");

scanf("%lf %lf %lf", &n1, &n2, &n3);

// if n1 is greater than both n2 and n3, n1 is the largest

if (n1 >= n2 && n1 >= n3)

printf("%.2f is the largest number.", n1);

// if n2 is greater than both n1 and n3, n2 is the largest

if (n2 >= n1 && n2 >= n3)

printf("%.2f is the largest number.", n2);

// if n3 is greater than both n1 and n2, n3 is the largest

if (n3 >= n1 && n3 >= n2)

printf("%.2f is the largest number.", n3);

return 0;

}

Ans 10.

#include <stdio.h>

int main() {

// declare variables

double cp, sp, pl;

// take input

printf("Enter the cost price: ");

scanf("%lf", & cp);

printf("Enter the selling price: ");

scanf("%lf", & sp);

// calculate profit and loss

pl = sp - cp;

// display the result

if (pl > 0)

printf("Profit = %lf per.", ((pl/cp)\*100));

else if (pl < 0)

printf("Loss = %lf per.", -((pl/cp)\*100));

else

printf("No profit, no loss");

return 0;

}

Ans 11.

#include <stdio.h>

int main() {

// Write C code here

int m1, m2, m3, m4, m5, tot;

float per;

printf("Enter Marks of Five Subjects:\n");

scanf("%d %d %d %d %d", &m1, &m2, &m3, &m4, &m5);

tot = m1+m2+m3+m4+m5;

printf("\nTotal Marks of Student = %d\n",tot);

/\*condition for checking student is pass or not.\*/

if(m1>=33 && m2>=33 && m3>=33 && m4>=33 && m5>=33)

{

printf("\nStudent is PASS\n");

per= tot/5.0;

printf("\nPercentage of a Student = %.2f",per);

}

else

printf("\nStudent is FAIL");

return 0;

}

Ans 12.

#include <stdio.h>

int main() {

// Write C code here

char ch;

printf("\nEnter The Character : ");

scanf("%c", &ch);

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

printf("Character is Upper Case Letters");

else

printf("Character is Not Upper Case Letters");

return 0;

}

Ans 13.

#include <stdio.h>

int main() {

// Write C code here

int num;

// Asking for Input

printf("Enter an number: ");

scanf("%d", &num);

if ((num % 3 == 0) && (num % 2 ==0)){

printf("%d is divisible by 3 and 2.", num);

}

else{

printf("%d is not divisible by 3 and 2.", num);

}

return 0;

}

Ans 14.

#include <stdio.h>

int main() {

// Write C code here

int num;

// Asking for Input

printf("Enter an number: ");

scanf("%d", &num);

if ((num % 7 == 0) || (num % 3 ==0)){

printf("%d is divisible by 7 or 3.", num);

}

else{

printf("%d is not divisible by 7 or 3.", num);

}

return 0;

}

Ans 15.

#include <stdio.h>

int main() {

// Write C code here

int num;

printf("Input a number :");

scanf("%d", &num);

if (num > 0)

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

else if(num < 0)

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

else

printf("%d is a zero number \n", num);

return 0;

}

Ans 16.

#include <stdio.h>

int main() {

// Write C code here

char ch;

scanf(“%c”,&ch);

if(ch >= 65 && ch <= 90)

printf("Upper");

else if(ch >= 97 && ch <= 122)

printf("Lower");

else if(ch >= 48 && ch <= 57)

printf("Number");

else

printf("Symbol");

return 0;

}

Ans17.

#include <stdio.h>

int main() {

// Write C code here

int side1, side2, side3;

/\*

\* Take length of three sides of triangle as input

\* from user using scanf

\*/

printf("Enter Length of Three Sides of a Triangle\n");

scanf("%d %d %d", &side1, &side2, &side3);

if((side1 + side2 > side3)&&(side2 + side3 > side1)

&&(side3 + side1 > side2)) {

printf("It is a Valid Triangle\n");

} else {

printf("It is an invalid Triangle");

}

return 0;

}

Ans 18.

#include <stdio.h>

// Function to find the number of Days

// in month input by user usingwwww

// switch statement

void printNumberOfDays(int N)

{

switch (N) {

// Cases for 31 Days

case 1:

case 3:

case 5:

case 7:

case 8:

case 10:

case 12:

printf("31 Days.");

break;

// Cases for 30 Days

case 4:

case 6:

case 9:

case 11:

printf("30 Days.");

break;

// Case for 28/29 Days

case 2:

printf("28/29 Days.");

break;

default:

printf("Invalid Month.");

break;

}

}

// Driver Code

int main()

{

// Input Month

int N ;

printf("Enter the month no.");

scanf("%d",&N);

// Function Call

printNumberOfDays(N);

return 0;

}