# Practical 03

1. #include <stdio.h>

int main()

{

int no1,no2,max;

printf ("Enter the first number:");

scanf("%d",&no1);

printf ("Enter the second number:");

scanf ("%d",&no2);

if (no1>no2)

printf ("Largest number is: %d\n",no1);

else

printf ("Largest number is: %d\n",no2);

}

2. #include <stdio.h>

int main()

{

int no1,no2,no3,L,S;

printf("Enter the first number:");

scanf ("%d",&no1);

if(no1>L)

else (no1<S)

printf ("Enter the second number:");

scanf ("%d",&no2);

if(no2>L)

else (no2>S)

printf ("Enter the third number:");

scanf ("%d",&no3);

if(no3>L)

else(no3<S)

printf ("The largest number is:%d\n ",L);

printf ("The smallset number is:%d\n",S);

}

3. #include <stdio.h>

int main()

{

char empname[30];

float bs,ns,inc;

printf ("Enter Employee name:");

scanf ("%s",empname);

printf ("Enter Basic Salary:");

scanf ("%f",&bs);

if(bs>=10000)

inc=bs\*0.15;

else if(bs>=5000);

inc=bs\*0.10;

else

inc=bs\*0.05;

ns=bs+inc;

printf ("Employee Name %s \n",empname);

printf ("New Salary is%.2f \n",ns);

}

4. #include <stdio.h>

int main()

{

float radius,cricumference,diameter,area;

float pi=3.14159;

printf ("Enter the radius of the circle:");

scanf ("%f",&radius);

diameter=2\*radius;

cricumference=2\*pi\*radius;

area=pi\*radius\*radius;

printf (" diameter of the circle:%f \n",&diameter);

printf ("cricumference of the circle:%f\n",&cricumference);

printf ("area of the circle:%f\n",&area);

return 0;

}

5. #include <stdio.h>

int main()

{

int no1,no2;

printf ("Enter the first number:");

scanf ("%d",&no1);

printf ("Enter the second number:");

scanf("%d",&no2);

if(no1%no2==0)

{

printf("%d is a multiple of %d:",no1,no2);

}

else

{

printf ("%d is not a multiple of %d:",no1,no2);

}

}

6. #include <stdio.h>

int main()

{

char ch;

int value;

printf ("ASCII values of upper case letters:\n");

for (ch ='A';ch<='Z';ch++)

{

printf ("%c:%d\n",&ch);

}

printf ("ASCII value of lower case letters:\n");

for (ch='a';ch<='z';ch++)

{

printf("%c:%d\n",&ch);

}

printf ("ASCII value of digits:\n");

for (ch='0';ch<='9';ch++)

{

printf ("%c\n",ch);

}

printf ("ASCII values of special symbols:");

printf ("$:%d\n",'$');

printf("\*:%d\n",'\*');

printf("+:%d\n",'+');

printf ("/:%d\n",'/');

printf ("Blank character:\n",' ');

}

7. #include <stdio.h>

int main()

{

char city;

int yos;

float bs,bonus;

float additionalallowance=0,bouns=0,grossremuneration;

printf ("Enter the Basic salary:");

scanf ("%f",&bs);

printf ("Enter the number of years of service:");

scanf ("%d",&yos);

printf ("Enter the City:");

scanf ("%c",city);

if (yos>5)

additionalallowance+=0.10\*bs;

if (city=='C')

additionalallowance+=2500;

if (bs>=50000)

bonus+=0.15\*bs;

else if (bs>=25000)

bonus+=0.12\*bs;

else

bonus+=0.10\*bs;

grossremuneration=bs+additionalallowance+bonus;

printf ("Gross Moonthly Remuneration:%.2f\n",grossremuneration);

}

# Practical 04

1. #include <stdio.h>

int main()

{

int no;

printf ("Enter an integer:");

scanf ("%d",&no);

if (no %2==0)

{

printf("%d is an even number\n");

}

else

{

printf ("%d is an odd number\n");

}

return 0;

}

#include <stdio.h>

int main()

{

int no;

printf ("Enter a integer:A");

scanf ("%d",&no);

switch(no %2)

{

case 1:

printf ("%d is an even number.\n",no);

break;

case 2 :

printf ("%d is an odd number.\n",no);

}

return 0;

}

2. #include <stdio.h>

int main()

{

int choice;

float no1,no2,result;

printf ("1.Addition\n");

printf ("2.Subtraction\n");

printf ("3.Multiplication\n");

printf ("4.Division\n");

printf ("Enter your choice");

scanf ("%d",&choice);

printf ("Enter two numbers");

scanf ("%f %f",no1,no2);

switch(choice)

{

case 1:

result=no1+no2;

printf ("Result %.2f\n",result);

break;

case 2:

result=no1-no2;

printf ("Result %.2f\n",result);

break;

case 3

result=no1\*no2;

printf ("Result %.2f\n",result);

break;

case 4

if(no2 !=0)

{

result =no1/no2;A

prinf ("Result %.2f\n",result);

}

else

{

printf ("Error :Division by zero is not allowed.\n");

}

break;

default:

printf ("Invaild choice");

}

return 0;

}

3. #include <stdio.h>

#define PI 3.14159

int main()

{

int choice;

float radius,result;

printf ("1.Calculate circumference of a circle\n");

printf ("2.Calculate area of a circle\n");

printf ("3.Calculate volume of a sphere\n");

printf ("Enter your choice:");

scanf ("%d",&choice);

printf ("Enter the radius:");

scanf ("%f",&radius);

switch(choice)

{

case 1:

result=2\*PI\*radius;

printf ("Circumference:%.2f\n",result);

break;

case 2:

result=PI\*radius\*radius;

printf ("Area:%.2f\n",result);

break;

case 3:

result=(4.0/3.0)\*PI\*radius\*radius\*radius;

printf ("Volume:%.2f\n",result);

break;

default:

printf ("Ivalid choice.\n");

}

return 0;

}

4. #include <stdio.h>

int main()

{

char vowal;

printf ("Enter a character:");

scanf ("%c",&vowal);

switch (vowal)

{

case 'a':

printf("vowal\n");

break;

case 'e':

printf ("vowal\n");

break;

case 'i':

printf ("vowal\n");

break;

case 'o':

printf ("vowal\n");

break;

case 'u':

printf("vowal\n");

break;

default:

printf ("NOt a vowal\n");

}

return 0;

}

5. #include <stdio.h>

int main()

{

int month;

printf ("Enter month number:");

scanf("%d",&month);

switch (month)

{

case 1:

printf ("January has 31 days");

break;

case 2:

printf ("February has 28 days");

break;

case 3:

printf ("March has 31 days");

break;

case 4:

printf ("April has 30 days");

break;

case 5:

printf ("May has 31 days");

break;

case 6:

printf ("June has 30 days");

break;

case 7:

printf ("July has 31 days");

break;

case 8:

printf ("August has 31 days");

break;

case 9:

printf ("September has 30 days");

break;

case 10:

printf ("Octomber has 31 days");

break;

case 11:

printf ("November has 30 days");

break;

case 12:

printf ("December has 31 days");

break;

default:

printf ("Invalid month number.\n");

}

}

# Practical 05

**Section A**

1. A] #include <stdio.h>

int main() {

int num = 0;

while (num <= 100) {

printf("%d ", num);

num++;

}

return 0;

}

B] #include <stdio.h>

int main() {

int num = 0;

do {

printf("%d ", num);

num++;

} while (num <= 100);

return 0;

}

C] #include <stdio.h>

int main() {

for (int num = 0; num <= 100; num++) {

printf("%d ", num);

}

return 0;

}

1. #include <stdio.h>

int main() {

int marks[10];

int total = 0;

float average;

printf("Enter 10 marks:\n");

for (int i = 0; i < 10; i++) {

printf("Mark %d: ", i + 1);

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

total += marks[i];

}

average = (float)total / 10;

printf("Total marks: %d\n", total);

printf("Average marks: %.2f\n", average);

if (average < 50) {

printf("Fail!\n");

} else {

printf("Pass!\n");

}

return 0;

}

#include <stdio.h>

int main() {

int number, i;

unsigned long long factorial = 1;

printf("Enter a number: ");

scanf("%d", &number);

if (number < 0) {

printf("Error: Factorial is not defined for negative numbers.\n");

} else {

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

factorial \*= i;

}

printf("Factorial of %d is %d\n", number, factorial);

}

return 0;

}

1. #include <stdio.h>

int main() {

int number, sum = 0, digit;

printf("Enter a number: ");

scanf("%d", &number);

while (number > 0) {

digit = number % 10; // Extract the last digit

sum += digit; // Add the digit to the sum

number /= 10; // Remove the last digit from the number

}

printf("The sum of the digits is: %d\n", sum);

return 0;

}

1. #include <stdio.h>

int main() {

int number, reversedNumber = 0, remainder;

printf("Enter a number: ");

scanf("%d", &number);

do {

remainder = number % 10;

reversedNumber = reversedNumber \* 10 + remainder;

number = number / 10;

} while (number != 0);

printf("Reversed number: %d\n", reversedNumber);

return 0;

}

1. #include <stdio.h>

int main() {

int base, exponent, result = 1;

printf("Enter the base: ");

scanf("%d", &base);

printf("Enter the exponent: ");

scanf("%d", &exponent);

int i;

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

result \*= base;

}

printf("%d raised to the power %d is: %d\n", base, exponent, result);

return 0;

}

1. #include <stdio.h>

int main() {

int n = 10;

int fib[n];

int i;

fib[0] = 0;

fib[1] = 1;

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

fib[i] = fib[i-1] + fib[i-2];

}

printf("The first 10 numbers of the Fibonacci sequence are:\n");

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

printf("%d ", fib[i]);

}

printf("\n");

return 0;

}

1. include <stdio.h>

int main() {

int number, originalNumber, remainder, result = 0, n = 0;

printf("Enter a number: ");

scanf("%d", &number);

originalNumber = number;

while (originalNumber != 0) {

originalNumber /= 10;

++n;

}

originalNumber = number;

while (originalNumber != 0) {

remainder = originalNumber % 10;

int power = 1;

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

power \*= remainder;

}

result += power;

originalNumber /= 10;

}

if (result == number)

printf("%d is an Armstrong number.\n", number);

else

printf("%d is not an Armstrong number.\n", number);

return 0;

}

1. #include <stdio.h>

int main() {

char letter;

printf("ASCII values for letters A to Z:\n");

for (letter = 'A'; letter <= 'Z'; letter++) {

printf("%c: %d\n", letter, letter);

}

return 0;

}

1. #include <stdio.h>

int main() {

int rows = 5;

printf("Pattern:\n");

for (int i = 1; i <= rows; i++) {

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

printf("\*");

}

printf("\n");

}

return 0;

}

1. #include <stdio.h>

int isPrime(int number) {

if (number <= 1) {

return 0; // Not a prime number

}

for (int i = 2; i \* i <= number; i++) {

if (number % i == 0) {

return 0; // Not a prime number

}

}

return 1; // Prime number

}

int main() {

int number;

printf("Enter a number: ");

scanf("%d", &number);

if (isPrime(number)) {

printf("%d is a prime number.\n", number);

} else {

printf("%d is not a prime number.\n", number);

}

return 0;

}

12) include <stdio.h>

int main() {

int number, i;

printf("Enter a positive integer: ");

scanf("%d", &number);

printf("Factors of %d are: ", number);

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

if (number % i == 0) {

printf("%d ", i);

}

}

printf("\n");

return 0;

}

1. #include <stdio.h>

int main() {

int number;

int sum = 0;

printf("Enter numbers to be added (enter -1 to stop):\n");

while (1) {

scanf("%d", &number);

if (number == -1) {

break;

}

sum += number;

}

printf("The sum is: %d\n", sum);

return 0;

}

14)

#include <stdio.h>

int main() {

int array[10];

int i;

printf("Enter 10 integers:\n");

for (i = 0; i < 10; i++) {

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

}

printf("The entered array is: ");

for (i = 0; i < 10; i++) {

printf("%d ", array[i]);

}

printf("\n");

return 0;

}

15)

#include <stdio.h>

int main() {

int array[10];

int i, count = 0;

printf("Enter 10 integers:\n");

for (i = 0; i < 10; i++) {

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

}

for (i = 0; i < 10; i++) {

if (array[i] % 2 == 0) {

count++;

}

}

printf("The count of even numbers in the array is: %d\n", count);

return 0;

}

**Section B**

1. #include <stdio.h>

int main() {

int numbers[10];

int i, positiveCount = 0, negativeCount = 0, zeroCount = 0;

printf("Enter 10 numbers:\n");

for (i = 0; i < 10; i++) {

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

}

for (i = 0; i < 10; i++) {

if (numbers[i] > 0) {

positiveCount++;

} else if (numbers[i] < 0) {

negativeCount++;

} else {

zeroCount++;

}

}

printf("Positive numbers: %d\n", positiveCount);

printf("Negative numbers: %d\n", negativeCount);

printf("Zeros: %d\n", zeroCount);

return 0;

}

1. #include <stdio.h>

int main() {

int marks[10];

int i, totalMarks = 0, maxMarks, minMarks;

printf("Enter marks of 10 students:\n");

for (i = 0; i < 10; i++) {

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

totalMarks += marks[i];

if (i == 0) {

maxMarks = marks[i];

minMarks = marks[i];

} else {

if (marks[i] > maxMarks) {

maxMarks = marks[i];

}

if (marks[i] < minMarks) {

minMarks = marks[i];

}

}

}

double averageMarks = (double) totalMarks / 10;

printf("Maximum Marks: %d\n", maxMarks);

printf("Minimum Marks: %d\n", minMarks);

printf("Average Marks: %.2lf\n", averageMarks);

return 0;

}

1. #include <stdio.h>

int main() {

double prices[10];

int i, count = 0;

double total = 0.0;

printf("Enter prices of 10 items:\n");

for (i = 0; i < 10; i++) {

scanf("%lf", &prices[i]);

total += prices[i];

if (prices[i] > 200) {

count++;

}

}

double average = total / 10;

printf("Average value of an item: %.2lf\n", average);

printf("Number of items with price > 200: %d\n", count);

return 0;

}

1. #include <stdio.h>

int main() {

int employeeNo, count = 0;

double basicSalary;

printf("Enter employee number and basic salary : \n");

while (1) {

scanf("%d", &employeeNo);

if (employeeNo == -999) {

break;

}

scanf("%lf", &basicSalary);

if (basicSalary >= 5000) {

count++;

}

}

printf("Number of employees with a basic salary >= 5000: %d\n", count);

return 0;

}

1. #include <stdio.h>

int main() {

int employeeNo, count = 0, overtimeCount = 0;

double hoursWorked, overtimePayment, totalOvertimePayment = 0.0;

printf("Enter employee number and hours worked :\n");

scanf("%d", &employeeNo);

while (employeeNo != -999) {

scanf("%lf", &hoursWorked);

if (hoursWorked > 40) {

overtimePayment = 150 \* 40 + 200 \* (hoursWorked - 40);

} else {

overtimePayment = 150 \* hoursWorked;

}

printf("Employee number: %d\n", employeeNo);

printf("Overtime payment: %.2lf\n", overtimePayment);

totalOvertimePayment += overtimePayment;

count++;

if (overtimePayment > 4000) {

overtimeCount++;

}

scanf("%d", &employeeNo);

}

double percentageExceeding4000 = (double) overtimeCount / count \* 100;

printf("\nSummary:\n");

printf("Total employees: %d\n", count);

printf("Total overtime payment: %.2lf\n", totalOvertimePayment);

printf("Percentage of employees with overtime payment exceeding Rs. 4000: %.2lf%%\n", percentageExceeding4000);

}