**Practical 3**

1. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num1,num2;

printf("enter the first number:");

scanf("%d",&num1);

printf("enter the second number:");

scanf("%d",&num2);

if(num1>num2){

printf("the highest number is:%d\n",num1);

}

else{

printf("the highest number is:%d\n",num2);

}

return 0;

}

2. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num1,num2,num3;

int largest,smallest;

printf("enter the first number");

scanf("%d",&num1);

printf("enter the second number");

scanf("%d",&num2);

printf("enter the third number");

scanf("%d",&num3);

largest=smallest=num1;

if (num2>largest)

largest=num2;

if (num3>largest)

largest=num3;

if (num2<smallest)

smallest=num2;

if (num3<smallest)

smallest=num3;

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

printf("the smallest number is:%d\n",smallest);

return 0;

}

3. #include <stdio.h>

#include <stdlib.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)

increment=bs\*0.15;

else if(bs>=5000)

increment=bs\*0.10;

else

increment= bs\*0.05;

ns=bs+increment;

printf("employee name:%s\n",empname);

printf("new salary:.2f\n",ns);

return 0;

}

4. #include <stdio.h>

#include <stdlib.h>

#define PI 3.14159

int main()

{

double radius, diameter, circumference, area;

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

scanf("%lf",&radius);

diameter= 2\*radius;

circumference= 2\*PI\*radius;

area= PI\*radius\*radius;

printf("diameter:%f\n",diameter);

printf("circumference:%f\n",circumference);

printf("area:%f\n",area);

return 0;

}

5. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num1,num2;

printf("enter the first number");

scanf("%d",&num1);

printf("enter the second number");

scanf("%d",&num2);

if (num1 % num2==0)

printf(num1,"is a multiple of:%d\n",num2);

else printf(num1,"is not a multiple of:%d\n",num2);

return 0;

}

6. #include <stdio.h>

#include <stdlib.h>

int main()

{

char characters[] = {'A','B','C','a','b','c','0','1','2','$','\*','+','/','0'};

int length=sizeof(characters)/sizeof(characters[0]);

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

printf("character:%c,integer equivalent:%d\n",characters[i],characters[i]);

}

return 0;

}

7. #include <stdio.h>

#include <stdlib.h>

int main()

{

float bs,ms,sp,bonus,addall,gr;

char city[30];

printf("enter the basic salary");

scanf("%f",&bs);

printf("enter the monthly sales:");

scanf("%f",&ms);

printf("enter the city(C for colombo):");

scanf("%c",&city);

printf("enter the service period");

scanf("%f",&sp);

if(sp > 5)

addall=bs\*0.1;

if(city=='C')

addall+=2500;

if(ms<=25000)

bonus=ms\*0.1;

else if(ms<=50000)

bonus=ms\*0.12;

else

bonus=ms\*0.15;

gr=bs+addall+bonus;

printf("the gross monthly remuneration is:%.2f\n",gr);

return 0;

}

**Practical 4**

1. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num;

printf("enter the number");

scanf("%d",&num);

if (num%2==0)

printf(" even",num);

else

printf(" odd",num);

return 0;

}

2. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num;

printf("enter the number");

scanf("%d",&num);

switch(num%2)

{

case 0: printf("the number is even");break;

case 1: printf("the number is odd");break;

default : printf("invalid input",num);

}

return 0;

}

4. #include <stdio.h>

#include <stdlib.h>

int main()

{

char ch;

printf("enter a character");

scanf("%c",&ch);

switch(ch)

{

case 'a':printf("a is a vowel");break;

case 'e':printf("e is a vowel");break;

case 'i':printf("i is a vowel");break;

case 'o':printf("o is a vowel");break;

case 'u':printf("u is a vowel");break;

default:printf("%c is not vowel",ch);

}

return 0;

}

5. #include <stdio.h>

#include <stdlib.h>

int main()

{

int month;

printf("enter the month number(1-12):");

scanf("%d",&month);

switch(month){

case 1:printf("january has 31 days\n");break;

case 2:printf("february has 28 days\n");break;

case 3:printf("march has 31 days\n");break;

case 4:printf("april has 30 days\n");break;

case 5:printf("may has 31 days\n");break;

case 6:printf("june has 30 days\n");break;

case 7:printf("july has 31 days\n");break;

case 8:printf("august has 31 days\n");break;

case 9:printf("september has 30 days\n");break;

case 10:printf("octomber has 31 days\n");break;

case 11:printf("november has 30 days\n");break;

case 12:printf("december has 31 days\n");break;

default:printf("invalid month number\n");break;

}

return 0;

}

**Practical 5**

1.while loop

#include <stdio.h>

#include <stdlib.h>

int main()

{

int i=0;

while (i <= 100){

printf("%d",i);

i++;

}

return 0;

}

Do while loop

#include <stdio.h>

#include <stdlib.h>

int main()

{

int i=0;

do {

printf("%d",i);

i++;

}while (i <= 100);

return 0;

}

For loop

#include <stdio.h>

#include <stdlib.h>

int main()

{

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

printf("%d",i);

}

}

2. #include <stdio.h>

#include <stdlib.h>

int main()

{

int marks[10];

int i, total=0;

float average;

printf("enter the 10 marks:\n");

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

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

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

total += marks[i];

}

average=total/10;

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

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

if (average<50){

printf("fail!\n");

} else {

printf("pass!\n");

}

}

3. #include <stdio.h>

#include <stdlib.h>

int main()

{

int number , factorial=1;

printf("enter a number:");

scanf("%d",&number);

if (number<0){

printf("factorial is not define for negative numbers\n");

} else{

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

factorial \*= i;

}

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

}

}

4. #include <stdio.h>

#include <stdlib.h>

int main()

{

Int num, digit, num=0;

Printf(“enter a number:”);

Scanf(“%d”,&num);

While(num > 0) {

Digit -num%10;

Sum +- digit;

Num /= 10;

}

Printf(“sum of digits: %d\n”,sum);

}

5. #include <stdio.h>

#include <stdlib.h>

int main()

{

int num, reversednum=0,digit;

printf("enter a number:");

scanf("%d",&num);

do{

digit = num%10;

reversenum = reversenum \*10+digit;

num /= ;

}while (num != 0);

Printf (“reversed number:%d\n”,reversenum);

return 0;

}

6. #include <stdio.h>

#include <stdlib.h>

int main()

{

int base, exp, result=1;

printf(“enter the base”);

scanf(“%d”,&base);

printf(“enter the exponent”);

scanf(“%d”,&exp);

for(“int i=0; i<exp; i++){

result \*= base;

}

Printf (“the power =%d”,result);

return 0;

}

7.#include <stdio.>

Int main()

{

Int n1=0, n2=1, next;

Int I;

//golden ratio = 1.618034

Printf(“Fibonacci sequence: %d %d”, n1,n2);

For (i=3; i<=10; i++){

Next = n1+n2;

Printf(“%d”,next);

N1=n2;

}

Printf (“\n”);

}

8. #include <stdio.h>

#include <stdlib.h>

int isArmstrong(int number);

int main()

{

int number;

printf("enter a number:");

scanf("%d",&number);

if(isArmstrong(number))

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

else

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

return 0;

9. #include <stdio.h>

#include <stdlib.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;

}

10. #include <stdio.h>

#include <stdlib.h>

int main()

{

//for lines

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

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

printf("\*");

}

printf("\n");

}

return 0;

}