CS102.3: Programming in C Language

Mid Assignment: Viva Session

Practical Number – 01

(1)

```
#include<stdio.h>
    int main ()
{
   printf("wenupa mandinu\n");//display the  name
   printf("st johns college");//display the school
}
```

(2)

```
#include<stdio.h>
int main()
{
   printf("*\n");//display the *
   printf("**\n");
   printf("***\n");
   printf("****\n");
   printf("*****\n");
}
```

(3)

```
#include<stdio.h>
int main()
{
   int x;
   char name[10];
   float z;
   double y;

   printf("Enter an integer\n");//input an integer
   scanf("%d",&x);

   printf("Enter a float\n");//input a float
   scanf("%f",&z);

   printf("Enter a double\n");
   scanf("%lf",&y);

   printf("Enter a character\n");//input a character
   scanf("%s",&name);


   printf("Integer you entered %d \n",x);//display the integer
   printf("float you entered %f \n",z);//display the float
```

```
    printf("double you entered %lf \n",y);//display the double
    printf("character you entered %s \n",name);// display the
character


}
```

(4)

```
#include<stdio.h>
int main()
{
    int x,y;

    printf("Enter the first number\n");// input the number
    scanf("%d",x);

    printf("Enter the second number\n");
    scanf("%d",y);




    printf("total value is %d \n",x+y);// total = x+y
    return 0;
}
```

(5)

```
#include<stdio.h>
int main()
{
  float x,y,tota,average ;

   printf("Enter the first number\n");// enter number
   scanf("%f",&x);

   printf("Enter the second number\n");
   scanf("%f",&y);

   total=x+y;
average = total/2

   printf("Total average is %.2f",average );//display the total
}
```

(6)

```
#include<stdio.h>
int main()
{
   int birth_year,age;
```

```
    char name[10];

    printf("Enter the student name\n");
    scanf("%s",&name);

    printf("Enter the birth_year\n");
    scanf("%d",&birth_year);

    age=2020-birth_year;//calculate the age

    printf("Student name is %s \n",name);
    printf("student age is %d \n",age);//display the age
}
```

(7)

```
#include<stdio.h>
int main()
{
    int x,y,a;

    printf("Enter first number\n");
    scanf("%d",&x);

    printf("Enter the second number\n");
```

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

    a=x;
    x=y;
    y=a;

    printf("After swap\n");

    printf("first number is %d \n",x);//dipaly the number
    printf("second number is %d \n",y);
}
```

(8)

```
#include<stdio.h>
main()
{
        printf("The color: %s\n", "blue");
        printf("First number: %d\n", 12345);
        printf("Second number: %04d\n", 25);
        printf("Third number: %i\n", 1234);
        printf("Float number: %3.2f\n", 3.14159);
        printf("Hexadecimal: %x\n", 255);
        printf("Octal: %o\n", 255);
        printf("Unsigned value: %u\n", 150);
```

```
        printf("Just print the percentage sign %%\n", 10);
}
```

Practical Number – 02

(1)

```
#include<stdio.h>
int main()
{
   int age;

   printf("Hi,How old are you?");//enter the age
   scanf("%d",&age);

   printf("Welcome %d \n",age);//display the message and the age
   printf("Let's Be Friends!");
    return 0;
}
```

(2)

```
#include<stdio.h>
int main()
{
   printf("%5d %5d %5d \n",2,4,8);//display the numbers with  5
spaces between the numbers
   printf("%5d %5d %5d \n",3,9,27);
```

```
    printf("%5d %5d %5d \n",4,16,64);
    printf("%5d %5d %5d \n",5,25,125);
}
```

(3)

```
#include<stdio.h>
int main ()
{
    float Avg_speed,Distance,Time;

    printf("Enter the distance travelled \n");
    scanf("%.2f",&Distance);

    printf("Enter the time taken \n");
    scanf("%d",&Time);

    Avg_speed = Distance/Time;//calculate the average speed

    printf("Average speed is %d",Avg_speed);// display the average
speed

    return 0;
}
```

(4)

```
#include<stdio.h>
int main()
{
   float f,c;//f= Fahrenheit , c = celsius

   printf("Enter the value for a \n");
   scanf("%f",&f);

   c = 5*(f-32)/9;//convert the Fahrenheit in Celsius

   printf("Celsius value is %.2f \n",c);

   return 0;
}
```

(5)

```
#include<stdio.h>
int main()
{
   int i=5,j;

   j=++i + ++i + ++i;

   printf("%d %d",i,j);//j=21 , i=8
```

```
    return 0;
}
```

(6)

```
#include<stdio.h>
int main()
{
    int i=1;
    i=2+2*i++;
    printf("%d",i);//i=4
    return 0;
}
```

(7)

```
#include<stdio.h>
int main()
{
    int a=5,b=5,c=8;
    c=a==b;
    printf("%d",c);//c=1
    return 0;
}
```

(8)

```
#include<stdio.h>
int main()
{
   int a=0,b=10;
   if(a=0)
   {
       printf("true");//if a=0 display the message
   }
   else
   {
       printf("false");//if a is not equal to 0 display the message
   }
   return 0;
}
```

Practical Number – 03

(1)

```
#include<stdio.h>
int main ()
{
int num1, num2;
  printf("Enter any 02 numbers ::: \n");//enter two numbers
  scanf("%d %d",&num1, &num2);

  if (num1>num2)
       printf("number 01 (%d) is the highest number",num1);//if the number 1 the highest display the message
    else
      printf("number 02 (%d) is the highest number",num2);//else display this message
}
```

(2)

```
#include<stdio.h>
int main ()
{
int num1, num2, num3;
printf("Enter any 03 numbers.. \nI will show you the largest value.\n");
```

```
scanf("%d %d %d", &num1, &num2, &num3);

    largest
    if (num1>num2 && num1>num3)//check the conditions
    printf("Number 01 (%d) is the largest value \n" , num1);//display
the largest

    if (num2>num1 && num2>num3) //check the conditions
       printf("Number 02 (%d) is the largest value \n", num2);

    if (num3>num1 && num3>num2) //check the conditions
       printf("Number 03 (%d) is the largest value \n", num3);

    smallest
    if (num1<num2 && num1<num3) //check the conditions
       printf("Number 01 (%d) is the smallest value \n", num1);

    if (num2<num1 && num2<num3) //check the conditions
       printf("Number 02 (%d) is the smallest value \n", num2);

    if (num3<num1 && num3<num2) //check the conditions
       printf("Number 03(%d) is the smallest value \n", num3);
}
```

(3)

```
#include<stdio.h>
int main()
{
char emp_name[20];
	float basic_salary;
	float increment;
	float new_salary;
	printf("Enter your name : \n");
	scanf("%s", &emp_name);

	printf("Enter your basic salary : \n");
	scanf("%f", &basic_salary);

	if (basic_salary < 5000) //check the conditions
	  {
	   increment = basic_salary*5/100;//calculate the increments
	   new_salary = basic_salary + increment;//calculate the new salary
	   printf("New salary:%.2f", new_salary);// display the new salary
	   }
```

```
    else if (basic_salary >= 5000 && basic_salary < 10000)
          {
           increment = basic_salary*10/100;
           new_salary = basic_salary + increment;
           printf("New salary:%.2f", new_salary);
           }

        else if (basic_salary >= 10000)
            {
             increment = basic_salary*15/100;
             new_salary = basic_salary + increment;
             printf("New salary:%.2f", new_salary);
             }
}
```

(4)

```
#include<stdio.h>
Int main()
{
   float radius,area,diameter,circumference;
   printf("Enter Radius : ");
   scanf("%f",&radius);
   area=(radius*radius)*3.14159;//calculate the area of the circle
```

```
   diameter=2*radius;//calculate the diameter of the circle
   circumference=2*3.14159*radius; calculate the circumference of
the circle


   printf("Area =  %.3f \n",area);
   printf("Diameter =  %.3f \n",diameter);
   printf("Circumference =  %.3f \n",circumference);
}
```

(5)

```
#include<stdio.h>
Int main()
{
int int1,int2;
   printf("Enter two integers : " );
   scanf("%d %d",&int1,&int2);
   if (int1%int2==0)//if int1=9 int2=3 9%3=0
      printf("The first is a multiple of the second.");
   else
      printf("The first is NOT a multiple of the second.");
}
```

(6)

```
#include<stdio.h>
```

```
Int main()
{
char ch;
   scanf("%c",&ch);
   int x;
   scanf("%d",&x);

    if (ch >= 'A' && ch <= 'Z') //check the conditions
     printf("Character is Upper Case Letters\n");
   else if (ch >= 'a' && ch <= 'z') //check the conditions
     printf("Character is Not Upper Case Letters\n");
   else
      printf("symbol\n");
   if(x>=0 && x<=9) //check the conditions
      printf("Integer\n");
}
```

(7)

```
#include<stdio.h>
Int main()
{
char cha;
   float basic_sal,bonus,remuneration=0;
   int service;
```

```
   printf("Enter 'c' if you are working in Colombo. If not enter 'n' ");
   scanf("%c",&cha);

   printf("Enter your basic salary : ");
   scanf("%f",&basic_sal);

   printf("Enter your service years : ");
   scanf("%d",&service);

   if(basic_sal<25000) //check the conditions
      bonus=basic_sal*10/100;//calculate the bonus
   else if(basic_sal<50000)
      bonus=basic_sal*12/100;
      else
         bonus=basic_sal*15/100;

   if(service>=5)
      bonus=bonus+(basic_sal*10/100);//add more 10% if the service
is more than 5 years
   if(cha=='c')
      bonus=bonus+2500;//add more 2500 rupees to the bonus if the
salesman working in Colombo
```

```
    remuneration=basic_sal+bonus;//calculate the remuneration
    printf("Remuneration = %f",remuneration);
}
```

Practical 4

Part A

Q1

```
#include <stdio.h>
int main() {
    int num;
    printf("Enter an integer: ");
    scanf("%d", &num);

    // True if num is perfectly divisible by 2
    if(num % 2 == 0)
        printf("%d is even.", num);
    else
        printf("%d is odd.", num);

    return 0;
}
```

Q2

```
#include <stdio.h>
```

```
int main() {
    char operator;
    double first, second;
    printf("Enter an operator (+, -, *,): ");
    scanf("%c", &operator);
    printf("Enter two operands: ");
   scanf("%lf %lf", &first, &second);

    switch (operator) {
    case '+':
        printf("%.1lf + %.1lf = %.1lf", first, second, first + second);
        break;
    case '-':
        printf("%.1lf - %.1lf = %.1lf", first, second, first - second);
        break;
    case '*':
        printf("%.1lf * %.1lf = %.1lf", first, second, first * second);
        break;
    case '/':
        printf("%.1lf / %.1lf = %.1lf", first, second, first / second);
        break;
        // operator doesn't match any case constant
    default:
        printf("Error! operator is not correct");
```

```
    }

    return 0;
}
```

Q3

```
#include <stdio.h>
void main ()
{
     int choice,r,l,w,b,h;
     float area;
     printf("Input 1 for area of circle\n");
     printf("Input 2 for area of rectangle\n");
     printf("Input 3 for area of triangle\n");
     printf("Input your choice : ");
     scanf("%d",&choice);
     switch(choice)
     {
         case 1:
              printf("Input radious of the circle : ");
              scanf("%d",&r);
              area=3.14*r*r;
              break;
          case 2:
```

```
            printf("Input length and width of the rectangle : ");
            scanf("%d%d",&l,&w);
            area=l*w;
            break;
        case 3:
            printf("Input the base and hight of the triangle :");
            scanf("%d%d",&b,&h);
            area=.5*b*h;
            break;
    }
    printf("The area is : %f\n",area);
}
```

Q4

```
#include <stdio.h>
int main()
{
  char ch;

  printf("Enter a character\n");
  scanf("%c", &ch);
  // Checking both lower and upper case, || is the OR operator
  if (ch == 'a' || ch == 'A' || ch == 'e' || ch == 'E' || ch == 'i' || ch == 'I'
|| ch =='o' || ch=='O' || ch == 'u' || ch == 'U')
    printf("%c is a vowel.\n", ch);
```

```
  else
    printf("%c isn't a vowel.\n", ch);

  return 0;
}
```

Q5

```
#include<stdio.h>
int main()
{
    int month;
    printf("Enter month number");
    scanf("%d",&month);

    switch(month)
{

case 1:
    printf("31 days");
    break;
case 2:
    printf("28/29 days");
    break;
case 3:
    printf("31 days");
```

```
    break;
case 4:
    printf("30 days");
    break;
case 5:
    printf("31 days");
    break;
case 6:
    printf("30 days");
    break;
case 7:
    printf("31days");
    break;
case 8:
    printf("31days");
    break;
case 9:
    printf("30days");
    break;
case 10:
    printf("31 days");
    break;
case 11:
    printf("30 days");
```

```
    break;
case 12:
    printf("30 days");
    break;
default:
    printf("Invalid input!Please enter month number between (1-12)");
}
 return 0;
}
```

Part B

Section A

Q1

```
1.  #include<stdio.h>
2.  int main(){
3.  int i;
4.  //Print numbers from 1 to 100.
5.  for(i = 1; i <= 100; i++){
6.  printf("%d ",i);
7.  }
8.  return 0;
```

Q2

```
#include <stdio.h>
int main(void){
```

```
int num;
printf("Enter your mark ");
scanf("%d",&num);
printf(" You entered %d", num); // printing outputs

        if(num >= 80){
        printf(" You got A grade"); // printing outputs
                }
        else if ( num >=60){ // Note the space between else & if
                printf(" You got B grade");
                }
        else if ( num >=40){
                printf(" You got C grade");
                }
        else if ( num < 40){
                printf(" You Failed in this exam");
                }
return 0;
}
```

Q3

```
#include <stdio.h>
int main() {
   int n, i;
   unsigned long long fact = 1;
```

```
    printf("Enter an integer: ");
    scanf("%d", &n);

    // shows error if the user enters a negative integer
    if (n < 0)
        printf("Error! Factorial of a negative number doesn't exist.");
    else {
        for (i = 1; i <= n; ++i) {
            fact *= i;
        }
        printf("Factorial of %d = %llu", n, fact);
    }

    return 0;
}
```

Q4

```
#include <stdio.h>

int main()
{
    int num, sum=0;

    /* Input a number from user */
    printf("Enter any number to find sum of its digit: ");
```

```
    scanf("%d", &num);

    /* Repeat till num becomes 0 */
    while(num!=0)
    {
        /* Find last digit of num and add to sum */
        sum += num % 10;

        /* Remove last digit from num */
        num = num / 10;
    }

    printf("Sum of digits = %d", sum);

    return 0;
}
```

Q5

```
1.  -int main() { int n, r = 0;
2.  printf("Enter a number to reverse\n"); scanf("%d", &n);
3.  while (n != 0) { r = r * 10; r = r + n%10; n = n/10; }
4.  printf("Reverse of the number = %d\n", r);
```

Q6

```
#include <stdio.h>
```

```
int main() {
    int base, exp;
    long long result = 1;
    printf("Enter a base number: ");
    scanf("%d", &base);
    printf("Enter an exponent: ");
    scanf("%d", &exp);

    while (exp != 0) {
        result *= base;
        --exp;
    }
    printf("Answer = %lld", result);
    return 0;
}
```

Q7

```
#include <stdio.h>
int main() {
    int t1 = 0, t2 = 1, nextTerm = 0, n;
    printf("Enter a positive number: ");
    scanf("%d", &n);

    // displays the first two terms which is always 0 and 1
    printf("Fibonacci Series: %d, %d, ", t1, t2);
```

```
    nextTerm = t1 + t2;

    while (nextTerm <= n) {
        printf("%d, ", nextTerm);
        t1 = t2;
        t2 = nextTerm;
        nextTerm = t1 + t2;
    }

    return 0;
}
```

Q8

```
#include <stdio.h>
int main() {
    int num, originalNum, remainder, result = 0;
    printf("Enter a three-digit integer: ");
    scanf("%d", &num);
    originalNum = num;

    while (originalNum != 0) {
       // remainder contains the last digit
        remainder = originalNum % 10;

       result += remainder * remainder * remainder;
```

```
    // removing last digit from the orignal number
    originalNum /= 10;
  }

  if (result == num)
    printf("%d is an Armstrong number.", num);
  else
    printf("%d is not an Armstrong number.", num);

  return 0;
}
```

Q9

```
#include <stdio.h>
int main() {
  char c;
  for (c = 'A'; c <= 'Z'; ++c)
    printf("%c ", c);
  return 0;
}
```

Q10

```
#include<stdio.h>

#define MAX 5
```

```
int main()
{
   int i,j;

   for(i=0; i< MAX; i++)
   {
      for(j=0;j<=i;j++)
      {
         printf("*");
      }
      printf("\n");
   }
   return 0;
}
```

Q11

```
#include <stdio.h>
int main() {
   int n, i, flag = 0;
   printf("Enter a positive integer: ");
   scanf("%d", &n);

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

```
        // condition for non-prime
        if (n % i == 0) {
            flag = 1;
            break;
        }
    }

    if (n == 1) {
        printf("1 is neither prime nor composite.");
    }
    else {
        if (flag == 0)
            printf("%d is a prime number.", n);
        else
            printf("%d is not a prime number.", n);
    }

    return 0;
}
```

Q12

```
#include <stdio.h>
int main()
```

```
 {
    int num, i;
    printf("Enter a positive integer: ");
    scanf("%d", &num);
    printf("Factors of %d are: ", num);
    for (i = 1; i <= num; ++i) {
        if (num % i == 0) {
            printf("%d ", i);
        }
    }
    return 0;
}
```

Q13

```
#include <stdio.h>

int main()
{
    int num,total=0;
    do

{
   printf("enter a number:");
   scanf("%d",&num);
   total=total=num;
```

```
}
  while (num!=-1);
  printf("Total=%d",total+1);
}
```

Q14

```
#include <stdio.h>
#define MAX_SIZE 1000 // Maximum array size

int main()
{
   int arr[MAX_SIZE]; // Declare an array of MAX_SIZE
   int i, N;

   /* Input array size */
   printf("Enter size of array: ");
   scanf("%d", &N);

   /* Input elements in array */
   printf("Enter %d elements in the array : ", N);
   for(i=0; i<N; i++)
   {
      scanf("%d", &arr[i]);
   }
```

```
    /*
     * Print all elements of array
     */
    printf("\nElements in array are: ");
    for(i=0; i<N; i++)
    {
        printf("%d, ", arr[i]);
    }

    return 0;
}
```

Q15

```
#include<stdio.h>

int main()
{
 int Size, i, a[10];
 int Even_Count = 0, Odd_Count = 0;

 printf("\n Please Enter the Size of an Array :  ");
 scanf("%d", &Size);

 printf("\nPlease Enter the Array Elements\n");
```

```
 for(i = 0; i < Size; i++)
 {
   scanf("%d", &a[i]);
 }

 for(i = 0; i < Size; i ++)
 {
   if(a[i] % 2 == 0)
   {
     Even_Count++;
   }
   else
   {
     Odd_Count++;
   }
 }

 printf("\n Total Number of Even Numbers in this Array = %d ",
Even_Count);
 printf("\n Total Number of Odd Numbers in this Array = %d ",
Odd_Count);
 return 0;
}
```

Section B

Q1

```
#include <stdio.h>

int main()
{
   int number, positive = 0, negative = 0, zero = 0;
   char choice;

   do
   {
      printf("Enter a number :");
      scanf("%d", &number);

      if (number > 0)
      {
         positive++;
      }
      else if (number < 0)
      {
         negative++;
      }
      else
      {
```

```
            zero++;
        }

        printf("Do you want to Continue(y/n)? ");
        scanf("%c", &choice);

    }while (choice == 'y' || choice == 'Y');



    printf("\nPositive Numbers :%d\nNegative Numbers :%d\nZero
Numbers :%d",
        positive, negative, zero);



    return 0;
}
```

Q2

```
#include<stdio.h>
int main()
{
    float average;
    int i, n, count=0, sum=0, squaresum=0, num, min, max;
```

```
printf("Enter how many student do you need\n");
scanf_s("%d",&n);

printf("Please enter %d numbers\n",n);

while(count<n)
{
   min=0;
   max=0;

      if(num>max)
        max=num;
      if(num<min)
        min=num;

      scanf_s("%d",&num);

   sum = sum+num;
   squaresum = squaresum + (num*num);

   count++;
}
   average = 1.0*sum/n;
```

```
    printf("Your average is %.2f\n",average);
    printf("The sum of your squares is %d\n",squaresum);



    printf("maximum number is %d\n",max);
    printf("minimum number is %d\n",min);

return(0);
}
```

Q3

```
  float price,total=0;
  int i,count=0;
      for(i=0;i<10;i++)
     {
         printf("Enter the price [%d] : ",i+1);
          scanf("%f",&price);
          total=total+price;


           if(price>200)
              count++;
       }
  printf("Items which the price is greater than 200 = %d \n",count);
     printf("Total = %.2f \n",total);
```

```
      printf("Average = %.2f \n",total/10);
```

Q4

```
int emp_no,count=0;
  float basic;
  do
   {
       printf("Enter Employee No : ");
      scanf("%d",&emp_no);
       printf("Enter basic salary : ");
      scanf("%f",&basic);

       if(basic>=5000)
         count++;
   }while(emp_no!=999);//here it takes 999th salary also
```

Q5

```
int count1=0,i,emp_num,ot,working_hours,ot_payment,count2=0;
  float percentage;
   for(count1=0;count1<1000;count1++)
   {
       printf("Enter the Employee Number %d = ",count1+1);
       scanf("%d",&emp_num);
       if(emp_num==-999)

   {
```

```
      break;
    }
    printf("Enter the number of hours worked of Employee Number
%d = ",emp_num);
  scanf("%d",&working_hours);
    for(i=count1;i<=count1;i++)
    {
          if(working_hours>40)
       {
            ot=working_hours-40;
            ot_payment=150*ot;
            printf("Overtime Payment = %d\n",ot_payment);
       }
          else
             printf("No Overtime Payment\n");
  }
    }
      if(ot_payment>4000)
       {
          count2=count2+1;
       }     percentage=(float)count2/count1*100;
     printf("The Percentage Of Whose Over Time Payment Exceeding
the Rs.4000 is %.2f",percentage);
}
```

Practical Number 05

01)

```
int arr[10],i,max=0,min=0,total=0;
for(i=0;i<10;i++)
{
    printf("Enter number [%d] : ",i+1);
    scanf("%d",&arr[i]);

    max=arr[0];
    min=arr[0];

    if(arr[i]>max)
        max=arr[i];
    if(arr[i]<min)
        min=arr[i];

    total=total+arr[i];
}
for(i=10;i>=0;i--)
{
    printf("%d ",arr[i]);
}

//i
```

```
    printf("MAX = %d \n",max);
    //ii
    printf("MIN = %d \n",min);
    //iii
    printf("AVARAGE = %d \n",total/10);
    //iv
    for(i=10;i>=0;i--)
    {
        printf("%d ",arr[i]);
    }
```

02) {

```
    int N, scalar_sum=0,i,j,scalar_pro=0,vector_pro=0;

printf("Please enter size of array\n");

scanf("%d",&N);

int a[N],b[N],c[N],vp[N],s[N],vs[N];


    for(i =0;i<N;i++){
```

```
            printf("Enter Values For Array 1 : ");
            scanf("%d",&a[i]);


    }
      printf("\n");

      for(j =0; j<N ; j++){
            printf("Enter Values For Array 2 : ");
            scanf("%d",&b[j]);
}


 for(i =0;i<N;i++){
        s[i]=a[i]+b[i];
        scalar_sum=scalar_sum+s[i];
   }

   printf("\nScalar Sum = %d \n",scalar_sum);


for(i = 0; i<N ; i++){
    c[i]=a[i]*b[i];
    scalar_pro=scalar_pro+c[i];
```

```
    }

    printf("Scalar Product is = %d\n",scalar_pro);


printf("\nVector Sum is : ");
       for(i =0;i<N ; i++){
          vs[i]=a[i]+b[i];
          printf("%d,",vs[i]);

       }


printf("\nVector Product is : ");
        for(i =0; i<N;i++){
            vp[i]=a[i]*b[i];
            printf("%d,",vp[i]);

        }

        printf("\n");
```

```
}
```

Practice - 06

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int arr1[3][3],arr2[3][3],arr3[3][3];//c-columns //r-rows
   int r,c;
   for(r=0;r<3;r++)
   {
      for(c=0;c<3;c++)
      {
         printf("Enter arr1[%d][%d]",r,c);
         scanf("%d",&arr1[r][c]);
      }
   }
   //arr1 finish
   printf("\n#arr1[][] has taken \n\n");

   for(r=0;r<3;r++)
   {
      for(c=0;c<3;c++)
```

```
    {
        printf("Enter arr2[%d][%d]",r,c);
        scanf("%d",&arr2[r][c]);
    }
}
//arr2 finish
printf("\n#arr2[][] has taken \n\n");

//print the output as a table arr1
for(r=0;r<3;r++)
{
    for(c=0;c<3;c++)
    {
        printf("%d\t",arr1[r][c]);
    }
    printf("\n");
}
printf("\n");
printf("\t +");
printf("\n");

//print the output as a table arr2
for(r=0;r<3;r++)
{
```

```
        for(c=0;c<3;c++)
        {
            printf("%d\t",arr2[r][c]);
        }
        printf("\n");
    }
    printf("\t =");
    printf("\n");
    //final output
    for(r=0;r<3;r++)
    {
      for(c=0;c<3;c++)
        {

            printf("%d \t",arr1[r][c]+arr2[r][c]);
        }
        printf("\n");
    }




    return 0;
}
```

Practical Number 06

01)

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int arr1[3][3],arr2[3][3],arr3[3][3];//c-columns //r-rows
   int r,c;
   for(r=0;r<3;r++)
   {
      for(c=0;c<3;c++)
      {
         printf("Enter arr1[%d][%d]",r,c);
         scanf("%d",&arr1[r][c]);
      }
   }
   //arr1 finish
   printf("\n#arr1[][] has taken \n\n");

   for(r=0;r<3;r++)
   {
      for(c=0;c<3;c++)
      {
```

```
        printf("Enter arr2[%d][%d]",r,c);
        scanf("%d",&arr2[r][c]);
    }
}
//arr2 finish
printf("\n#arr2[][] has taken \n\n");

//print the output as a table arr1
for(r=0;r<3;r++)
{
    for(c=0;c<3;c++)
    {
        printf("%d\t",arr1[r][c]);
    }
    printf("\n");
}
printf("\n");
printf("\t +");
printf("\n");

//print the output as a table arr2
for(r=0;r<3;r++)
{
    for(c=0;c<3;c++)
```

```
        {
            printf("%d\t",arr2[r][c]);
        }
        printf("\n");
    }
    printf("\t =");
    printf("\n");
    //final output
    for(r=0;r<3;r++)
    {
      for(c=0;c<3;c++)
        {

            printf("%d \t",arr1[r][c]+arr2[r][c]);
        }
        printf("\n");
    }

    return 0;
}
```

Practical Number 07

01) //NO parameters
//WITH return

```
int integerPower()
{
    int base,ex,power=1,i;
    printf("Enter base : ");
    scanf("%d",&base);
    printf("Enter exponent : ");
    scanf("%d",&ex);

    for(i=1;i<=ex;i++)
    {
        power=power*base;
    }
    return power;
}

int main()
{
    printf("power = %d",integerPower());//calling function
}
```

02)

```
#include <stdio.h>
int time(int hours,int minutes,int seconds)
{
  int ans;
  ans=((hours*3600)+(minutes*60)+seconds);
  return ans;
}
int main()
{
 int h1,h2,m1,m2,s1,s2;

 printf("First Time\n");
 printf("Enter Hours\n");
 scanf("%d",&h1);
 printf("Enter Mintues\n");
 scanf("%d",&m1);
 printf("Enter Seconds\n");
 scanf("%d",&s1);
 printf("Second Time\n");
 printf("Enter Hours\n");
 scanf("%d",&h2);
 printf("Enter Minutes\n");
 scanf("%d",&m2);
```

```
 printf("Enter Seconds\n");
 scanf("%d",&s2);
 printf("%d Seconds",time(h1,m1,s1)-time(h2,m2,s2));
}
```

03(a)

```
//NO parameters
   //WITH return

     int celsius()
     {
        int cl,fr;
        printf("Enter Fahrenheit : ");
        scanf("%d",&fr);
        cl=(fr-32)*5/9;
```

```
    return cl;
}
 int main()
 {
    printf("celsius = %d",celsius());
 }
```

03(b)

```
//NO parameters
//WITH return

 int fahrenheit()
 {
    int cl,fr;
    printf("Enter Celsius : ");
    scanf("%d",&cl);
   // cl=(fr-32)*5/9;
    fr=(cl*9/5)+32;
    return fr;
 }
 int main()
 {
    printf("fahrenheit = %d",fahrenheit());
 }
```

03(c)

```
//NO parameters
//NO return type

void temp_converter()
{
   int cl,fr,i;
   for(i=0;i<=100;i++)
   {
      cl=i;
      fr=(cl*9/5)+32;
      printf("Celsius- %d \t Fahrenheit - %d \n",cl,fr);
   }
   printf("\n");
   for(i=32;i<=212;i++)
   {
      fr=i;
      cl=(fr-32)*5/9;
      printf("Fahrenheit- %d \t Celsius - %d \n",fr,cl);
   }
}

int main()
```

```
{
   temp_converter();
}
```

04)

```
//NO parameters
//NO parameters

void smallest()
{
   float no,min=0,max=0;
   int i;
   min=no;
   for(i=0;i<3;i++)
   {
```

```
        printf("Enter a number [%d] : ",i+1);
        scanf("%f",&no);

        if(no>max)
            max=no;
        if(no<min)
            min=no;

    }
    printf("%.3f is the smallest",min);
}
int main()
{
    smallest();
}
```