```c
//print natural number

/* # include<stdio.h>
   void main()
   {
    int i=1;
    while(i<50)
    {
     printf("%d\n",i);
     i++;
    }
   }
   */

// natural number in reverse

 /* # include<stdio.h>
   void main()
   {
    int i=50;
    while(i>=1))
    {
     printf("%d\n",i);
     i;
    }
   }
 */

//alphabates

/* #include<stdio.h>
 void main()
 {
  int i='A';
  while( i<='Z')
  {
    printf("%c\n",i);
    i++;
  }
 }
 */


//  ASCII values

 /*# include<stdio.h>
   void main()
   {
    int i= 'A';
    while(i<= 'Z')
    {
     printf("%d\n",i);
     i++;
    }
   }
  */


//  sum of even no

  /*# include<stdio.h>
    void main()
    {
     int sum = 0,i=1;

        while(i<=10)
```

```
        {
          if(i%2==0)
          {
            sum=sum+i;
          }
          i++;
        }
        printf("sum of even no is = %d ",sum);
      }
    */


//multiplication table

    /*#include<stdio.h>
    void main()
    {
     int a,j;
     printf("enter the no ");
     scanf("%d",&a);
     for(int i=1;i<=10;i++)
     {
        j=a*i;
        printf("%d\n",j);
     }
    }
    */


  //factorial of a no

 /* # include<stdio.h>
   void main()
   {   int a,fact=1;
       printf("enter any number");
       scanf("%d",&a);
       for(int i=a;i>0;i--)
        {
          fact=fact*i;
        }
        printf("factorial of a number is :%d\t",fact);
    }
  */

  // power of a number using for loop

 /* # include<stdio.h>
   void main()
   {
    int a,power;
    printf("enter the number\n");
    scanf("%d",&a);
    int t=a;
    printf("enter the requried power\n");
    scanf("%d",&power);
    for( int i=1;i<=power-1;i++)
    {
      a=a*t;

    }
    printf("power =: %d",a);
   }
  */


   //find count of digit in number
```

```c
/* # include<stdio.h>
   void main()
   {
     int a,count=0;
     printf("enter any number");
     scanf("%d",&a);
     while(a>0)
     {
      a=a/10;
      count++;
     }
     printf("count= %d\t",count);
   }
   */

   //find first and last number


  /*#include<stdio.h>
  void main()
  {
    int a,first ,last;
    printf("enter your number");
    scanf("%d",&a);
    last = a%10;
    while (a>0)
    {

      first=a%10;
      a=a/10;
     }
    printf("last=%d\t",last);
    printf("first=%d\t",first);
  }
   */

  // swapping first and last number


 /* # include <stdio.h>
  void main()
  {
    int a,count=0,temp,temp1,first,last;
    printf("enter the number\n");
    scanf("%d",&a);
    temp=a;
    temp1=a;
    while(a>0)
    {
      a=a/10;
      count++;
    }
    printf("count = %d\t",count);
    last= temp%10;
    while(temp>0)
    {
      first =  temp%10;
      temp=temp/10;
    }
    int first1 = first;
    temp1=temp1-last;
    for(int i=0;i<count-1;i++)
    {
      last=last*10;
    }
```

```c
          for(int j=0;j<count-1;j++)
          {
            first = first*10;
          }
          temp1 = temp1 - first;
          temp1 = last + temp1 + first1;
          printf("%d\t",temp1);
        }
      */

      //print even /odd no

  /*  #include<stdio.h>
      void main()
      {

        for( int i=0;i<=10;i++)
        {
          if(i%2==0)
          {
            printf("%d\n",i);
          }
        }

      }
      */

    // factors of number

  /* # include<stdio.h>
      void main()
      {
        int a;
        printf("enter the number\n");
        scanf("%d",&a);
        printf("factors of given number are\n");
        for(int i=1;i<=a;i++)
        {
          if(a%i==0)
          {
            printf("%d\n",i);
          }
        }
      }
      */

    // find the gcd

  /*  #include<stdio.h>
    void main()
    {
      int a,b,i,gcd;
      printf("enter two numbers");
      scanf("%d\n%d",&a,&b);
      for(i=1;i<=a||i<=b;i++)
        {
          if(a%i==0 && b%i==0)
          {
            gcd=i;
           // break;
          }
        }
      printf("GCD of a number = %d\n",gcd);
    }
    */
```

```c
// given no is prime or not

//* # include<stdio.h>
/*  void main()
   {
     int a,flag=0;
     printf("enter a number\n");
     scanf("%d",&a);
     for(int i=1;i<a;i++)
     { if(i==1)
        {
         continue;
        }
       if(a%i==0)
         {
          flag=1;
         }


       }
       if(flag==0)
       {
       printf("the given number is a prime number\n");
       }
       else
       printf("it is not a prime number\n");
       }
*/


// to print the prime numbers in a range


/*# include <stdio.h>
void main()
{
   int a,flag=0,sum=0;
   for(int i=1;i<10;i++)
    { flag=0;
       if (i==1)
       {
        continue;
       }
       for(int j = 1;j<i;j++)
       {
         if (j==1)
         {
          continue;
         }
         if(i%j==0)
         {
          flag=1;
         }
       }

       if(flag==0)
       {
        printf("%d\n",i);
        sum=sum+i;
       }
       }
       printf("sum of a prime numbers =%d\t",sum);
       }
       */
```

```c
// prime factors of a number

/* # include<stdio.h>
   void main()
   {
     int a,flag=0;
     printf("enter your number\n");
     scanf("%d",&a);
     for(int i=1;i<=a;i++)
     {
      if(a%i==0)
      {
       if(i==1)
       {
         continue;
       }
       for(int j=1;j<i;j++)
        {
          if(j==1)
          {
           continue;
          }
          if(i%j==0)
          {
            flag=1;
          }
        }
        if(flag==0)
        {
         printf("%d\n",i);
        }
       }
      }
     }
    */

   // addition of digits

  /* # include<stdio.h>
    void main()
    {
     int a,b,sum=0;
     printf("enter the number\n");
     scanf("%d",&a);
    while(a>0)
    {
    b=a%10;
    a=a/10;
    sum=sum+b;
    }
    printf("sum =%d\t",sum);
    }
    */

   // reverse of a number
/*    #include<stdio.h>
   void main()
   {
 int n;
 int rev=0;
  int rem;
 printf("enter the number\n");
 scanf("%d",&n);
 while(n>0)
 {
  rem=n%10;
```

```c
  n=n/10;
  rev=rev*10+rem;
 }
printf("%d",rev);
}
*/


 // palindrome of a number


 /*  #include<stdio.h>
    void main()
    {
int n,test;
int rev=0;
 int rem;
printf("enter the number\n");
scanf("%d",&n);
test=n;
while(n>0)
{
 rem=n%10;
 n=n/10;
 rev=rev*10+rem;
}
 printf("%d",rev);
if(test==rev)
{
 printf("the given ny=umber is palindrome\n");
}
 else
printf("not palindrome\n");
}
*/

// sum of digits of number

 /* # include<stdio.h>
   void main ()
   {
     int a,sum=0;
     printf("enter the number\n");
     scanf("%d",&a);
     while(a>0)
     {
      sum=sum+a%10;
      a=a/10;
     }
     printf("sum is = %d",sum);
    }
 */


   // multiplication of digit


  /*  # include<stdio.h>
   void main ()
   {
     int a,product=1,d;
     printf("enter the number\n");
     scanf("%d",&a);
     while(a>0)
     {
       //d=a%10;
```

```c
        product=product*(a%10);
        a=a/10;
      }
      printf("product is = %d",product);
    }
  */

 //number in words

/* # include<stdio.h>
 void main()
 {
  int i=0,n,c=0,r,j,a;
  printf("enter the number\n");
  scanf("%d",&n);
  while(i>0)
  {
    r=n%10;
    n=n/10;
    i=i*10+r;
  }
  printf("%d",i);
  while(i>0)
  {
  a=a%10;
  i=i/10;
  switch(a)
  {
   case 0: printf("zero");
            break;
    case 1: printf("one");
            break;
    case 2: printf("two");
            break;
     case 3: printf("three");
            break;
      case 4: printf("four");
            break;
      case 5: printf("five");
            break;
      case 6: printf("six");
            break;
    case 7: printf("seven");
            break;
    case 8: printf("eight");
            break;
     case 9: printf("nine");
            break;
  }
  }
 }
 */


 // frequency count
/* #include<stdio.h>
 void main()
{
  int no,c=0,techno;
  printf("\n Enter number ");
  scanf("%d",&no);
  for(int i=0;i<=9;i++)
  {
    c=0;
    techno=no;
    while(techno>0)
```

```c
        {
         if(i==techno%10)
         {
           c++;
         }
          techno=techno/10;
        }
        if(c!=0)
        {
         printf("\n count of %d is %d ",i,c);
        }
        }
}
*/

// check for given number is perfect or not

 /*# include<stdio.h>
  void main()
  {
  int a,sum=0;
  printf("enter a number\n");
  scanf("%d",&a);
  for(int i=1;i<a;i++)
  {
     //if(i==1)
     //{
      //continue;
     //}
     if(a%i==0)
     {
        sum=sum+i;
     }
  }
  if(sum==a)
  {
   printf("no is perfect\n");
  }
  else
  printf("not perfect\n");
 }
*/

 //strong number

 /*#include<stdio.h>
 void main()
 {
  int a,r,sum=0,fact,temp;
  printf("enter the number\n");
  scanf("%d",&a);
  r=a;
  while(a>0)
  {
   temp=a%10;
   fact=1;
   for(int i=temp;i>0;i--)
   {
     fact=fact*i;
   }
   sum=sum+fact;
   a=a/10;
  }
  if(sum==r)
  {
   printf("strong number\n");
```

```
  }
  else
  printf("not strong");
  }

  */
```