```
//  1 print natural number

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

// 2 natural number in reverse

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

// 3 alphabates

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

// 4 ASCII values

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

// 5 ,6 sum of even no

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

       while(i<=10)
```

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


// 7 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);
     }
    }
    */


  // 8 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);
    }
  */

  // 9 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);
   }
   */


   //10 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);
  }
  */

  // 11 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);
  }
  */

  //12  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);
        }
      */

    //13,14 print even /odd no

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

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

     }
     */

   //15 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);
          }
       }
     }
     */

  // 16,17 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
// 18 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");
   }
*/


 //19 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
// 20 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);
          }
        }
      }
     }
   */

   // 21 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);
     }
     */

     // 22 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);
}



 // 23palindrome 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");
}
*/

// 24sum 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);
    }
 */


   //25 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);
    }
  */

 //26number 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;
 }
 }
 }
 */


 // 27frequency 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);
    }
   }
}
*/

// 28check 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");
  }
*/

 //29strong 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");
    }

   */

//30 Armstrong number
/*
# include<stdio.h>
 void main()
 {
  int num,count=0,rem,rem1,sum=0;
  printf("Enter a number \n");
  scanf("%d",&num);
  int num1 = num;
  int num2 = num;
  printf("%d\n",num1);

  while(num>0)
  {
   num = num/10;
   count++;
  }
  printf("Total number of digits = %d\n",count);
 while(num1>0)
 {
  rem = num1%10;
  rem1 = rem;
  num1 = num1/10;
  for(int i=0;i<count-1;i++)
  {
   rem = rem*rem1;
  }
  printf("%d\n",rem);
  sum = sum+rem;
 }
 if(sum == num2)
 {
  printf("armstrong/n");
 }
 else
 {
 printf("not armstrong\n");
 }
}
 */
```