6.factorial number using do-while

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

  do{
    factorial*=i;
    i++;
    }while(i<=n);
  printf("factorial of %d is %d",n,factorial);
}
```

7.sum of digits

```
#include <stdio.h>
int main()
{
  int n,sum=0;
  printf("Enter the number :");
  scanf("%d",&n);
  while(n!=0){
    sum=sum+n%10;
    n=n/10;
  }
  printf("sum of digits is %d",sum);
}
```

8.prime number or not

```
#include<stdio.h>
int main()
{
  int n,i,flag=0;
  printf("Enter a positive integer: ");
  scanf("%d",&n);
  if(n==0||n==1)
    flag=1;
  for(i=2;i<=n/2;++i){
    if(n%i==0){
      flag=1;
      break;
    }
  }
if(flag==0)
  printf("%d is a prime number.",n);
  else
  printf("%d is not a prime number.",n);
  return 0;
}
```

9.Armstrong number

```
#include<stdio.h>
#include<math.h>
int main()
{
  int n,originalnum,remainder,result=0,digits=0;
  printf("enter the number: ");
  scanf("%d",&n);
  originalnum=n;
  while(originalnum!=0){
    originalnum /= 10;
    digits++;
 printf("iteration: %d ,digits counted so far :%d\n",digits, digits);
}
originalnum = n;
while (originalnum!=0) {
  remainder=originalnum%10;
  result+=pow(remainder,digits);
  originalnum/=10;
}
if (result==n)
  printf("%d is an armstrong number",n);
else
  printf("%d is not an armstrong number",n);
}
```

10.type 2 armstrong

```
#include<stdio.h>
int main()
{
  int n,temp,rem,result=0;
  printf("Enter a number:\n ");
  scanf("%d",&n);
  temp=n;
  while(temp!=0)
    {
      rem=temp%10;
      result=result+rem*rem*rem;
      temp=temp;
    }
  if(result==n)
  {
    printf("Armstrong number");}
  else{
    printf("Not an Armstrong number");
  }
}
```