**Using Function Recursion**

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| 1 | Factorial of a number using Function Recursion |
|  | int fact(int);  main()  {  int x,n;  cout<<"Enter a number :";  cin>>n;  x=fact(n);  cout<<x;  }  int fact(int n)  {  static int f=1;  if(n>0)  {  f=f\*n;  n--;  fact(n);  }  return f;  } |
| 2 | Summation of each digit of a number using recursion |
|  | #include "iostream"  using namespace std;  int sum\_digit(int);  main()  {  int x,n;  cout<<"Enter a number :";  cin>>n;  x=sum\_digit(n);  cout<<x;  }  int sum\_digit(int n)  {  static int s=0;  if(n>0)  {  s=s + n%10;  n=n/10;  sum\_digit(n);  }  return s;  } |
| 3 | Check a number is strong number or not using recursion |
|  | #include "iostream"  using namespace std;  int sum\_digit(int);  int strong(int);  int fact(int);  main()  {  int x,n;  cout<<"Enter a number :";  cin>>n;  x=strong(n);  if(x==n)  cout<<"Strong";  else  cout<<"Not strong";  }  int strong(int n)  {  static int s=0;  int r,f;  if(n>0)  {  r=n%10;  f=fact(r);  s=s+f;  n=n/10;  strong(n);  }  return s;  }  int fact(int n)  {  static int f=1;  if(n>0)  {  f=f\*n;  n--;  fact(n);  }  return f;  } |
| 4 | Given number is palindrome or not using recursion |
|  | #include "iostream"  using namespace std;  int palindrome(int);  main()  {  int n,x;  cout<<"Enter a number:";  cin>>n;  x=palindrome(n);  if(x==n)  cout<<"Palindrome ";  else  cout<<"Not palindrome ";  }  int palindrome(int num)  {  static int r=0;  if(num>0)  {  r=r\* 10 + num%10;  num=num/10;  palindrome(num);  }  return r;  } |
| 5 | Check a string palindrome using recursion |
|  | #include "iostream"  using namespace std;  void check\_palindrome(char \*,int);  main()  {  char x[100],y[100];  cout<<"Enter a string :";  cin>>x;  strcpy(y,x);  check\_palindrome(x,strlen(x)-1);  if(strcmp(x,y)==0)  cout<<"Palindrome";  else  cout<<"Not Palindrome";  }  void check\_palindrome(char \*x,int j)  {  char temp;  static int i=0;  if(i<j)  {  temp=x[i];  x[i]=x[j];  x[j]=temp;  i++;  j--;  check\_palindrome(x,j);  }  } |