# Program-08

-> Write a program to implement functions of Dictionary using Hashing.

using linear probing:-

```
HashFunction::HashFunction()
{
 int i;
 for(i=0;i<10;i++)
  {
      h[i].key=-1;
      strcpy(h[i].name,"NULL");
    }
}
void HashFunction::Delete(long k)
{
 int index=find(k);
 if(index==-1)
  {
    cout<<"Init key Not Found";
  }
  else
  {
  h[index].key =-1;
  strcpy(h[index].name,"NULL");
  cout<<"Init key is Deleted";
 }
}
```

```
int HashFunction::find(long k)
{
 int i;
 for(i=0;i<10;i++)
 {
  if(h[i].key==k)
   {
   cout<<"\n\t"<<h[i].key<<" is found at"<<i
      "location with Name"<<h[i].name;
   return i;
   }
 }
 if(i==10)
   {
     return -1;
   }
}
void HashFunction::display()
{
 int i;
 cout<<"\n\t\tkey\t\tName";
 for(i=0; i<10; i++)
  {
   cout<<"\n\th["<<i<<"]\t"<<h[i].key<<"\t\t
                                        <<h[i].nam
  }
}

void HashFunction::insert()
{
 char ans, n[10], ntemp[10];
 long k, temp;
 int v, hi, cnt=0, flag=0, i;
```

```
do
{
 if(cnt>=10)
  {
   cout<<"\n\tHash Table is FULL";
   break;
  }
 cout<<"\n\tEnter a Telephone No:";
 cin>>k;
 cout<<"\n\tEnter a client Name:";
 cin>>n;
 hi=k%10;
if(h[hi].key==-1)
 {
   h[hi].key=k;
   strcpy(h[hi].name,n);
 }
else
 {
  if(h[hi].key%10!=hi)
  {
    temp=h[hi].key;
    strcpy(ntemp, h[hi].name);
    h[hi].key=k;
    strcpy(h[hi].name,n);
   for(i=hi+1;i<10;i++)
   {
     if(h[i].key==-1)
      {
       h[i].key=temp;
       strcpy(h[i].name,ntemp);
        flag=1;
        break;
      }
for(i=0; i<hi && flag==0; i++)
 {
   if(h[i].key==-1)
    {
     h[i].key=temp;
     strcpy(h[i].name, ntemp);
     break;
    }
  }
}
else
{
 for(i=hi+1; i<10; i++)
  {
   if(h[i].key==-1)
    {
      h[i].key=k;
      strcpy(h[i].name,n);
      flag=1;
      break;
    }
  }
  for(i=0; i<hi && flag==0; i++)
  {
   if(h[i].key ==-1)
   {
     h[i].key=k;
     strcpy(h[i].name, n);
     break;
   }
  }
}
```

```
}
```

```
    flag=0;
    cnt++;
   cout<<"\n\t...Do you Want to Insert More
                              key : y/n";
    cin>>ans;
  }while(ans=='y'||ans=='y');
}
```