DATE:23/11/2023

PROGRAM-19

AIM: **:** Create a class called LIST with two pure virtual function store() and retrieve(). To store a value call store and to retrieve call retrieve function. Derive two classes stack and queue from it and override store and retrieve.

CODE:

```cpp
#include<iostream>
using namespace std;
class list{
public:
int a[5]={1,2,3,4};
int item;
int maxsize=5;
int top=3;
virtual void store(){
 if(top==maxsize){
 cout<<"\nstack is full"<<endl;
 }
 cout<<"\nthe enter item"<<endl;
 cin>>item;
 top=top+1;
 a[top]=item;
}
virtual void show(){
 int i;
 for(i=0;i<maxsize;i++){
  cout<<a[i];
 }
 }
```

```cpp
};
class stack :public list{
public:
/*void store(){
 if(top==maxsize){
 cout<<"stack is full"<<endl;
 }
 cout<<"the enter item"<<endl;
 cin>>item;
 top=top+1;
 a[top]=item;
}
 void show(){
  int i;
  for(i=0;i<maxsize;i++){
   cout<<a[i];
 }
}*/
};
class quese:public list{
};
int main(){
stack s;
quese q;
list *l;
l=&s;
l=&q;
l->store();
l->show();
```

```
l->store();

l->show();

q.store();

q.show();

}
```