



National University
of computer and emerging sciences

TASK

```
/*
```

```
ARRAY BASED LIST
```

```
*/
```

```
#include<iostream>
```

```
#include<string>
```

```
using namespace std;
```

```
class list{
```

```
private:
```

```
    int *arr; //will be used to initialize an empty list and will always point to the first position.
```

```
    int size; //total capacity of the list
```

```
    int len; //number of current elements in the list
```

```
    int *current; //pointer to point the current position
```

```
    int *temp; //can be used for temporary works
```

```
public:
```

```
    //Constructor for initializing List
```

```
    //You can initialize size to any value
```

```
    list(){
```

```
    }
```

```
    //overloaded constructor
```

```
    //user will pass decided the size of the list
```

```
    list(int userSize){
```

```
}
```

```
//Deep Copy Constructor
```

```
//write code to create a new list and copy elements of the list passed in the parameter
```

```
list(list& othrList){
```

```
}
```

```
//Clear Or Empty the List
```

```
void clear(){
```

```
}
```

```
//Insert a Value at Specific Position
```

```
void insert(int value,int pos){
```

```
}
```

```
//Insert the given value in the list at the next available position
```

```
void insert(int value){
```

```
}
```

```
//Remove a value at specific position
```

```
void remove(int pos){
```

```
}
```

```
//Get value stored at a specific position
```

```
int get(int pos){
```

```
}
```

```
//Update Existing value at a position
void update(int value,int pos){
```

```
}
```

```
//Find a value in the list
bool find(int value){
```

```
}
```

```
//Return Current Length of the list
int length(){
```

```
}
```

```
//Move to starting position of the list
void start(){
```

```
}
```

```
//Move to the end of the list
void end(){
```

```
}
```

```
//checks whehter the list is completely filled or not
bool isFull(){
```

```
}
```

```
//checks whehter the list is completely empty or not
bool isEmpty(){
```

```
}
```

```
};
```

```
void main(){
```

```
    system("pause");  
}
```