Q.No.1)

```
C+ main.cpp
                                                                         1 #include <iostream>
                                                                                   3 of Clubs
                                                                                   King of Hearts
     2 #include <vector>
                                                                                   Ace of Hearts
     3 #include <algorithm>
                                                                                   8 of Hearts
     4 #include <ctime>
                                                                                  King of Spades
Ace of Clubs
                                                                                  Jack of Diamonds
King of Clubs
3 of Spades
     6 v class Card {
     7 public:
                                                                                   4 of Spades
     8
            static std::vector<std::string> faces:
                                                                                   Queen of Hearts
     9
             static std::vector<std::string> suits;
                                                                                  9 of Spades
2 of Spades
    10
                                                                                   9 of Hearts
    11
            Card(int face, int suit) : face(face), suit(suit) {}
                                                                                   8 of Clubs
    12
                                                                                   6 of Hearts
    13 🗸
             std::string toString() {
                                                                                   Ace of Diamonds
    14
               return faces[face] + " of " + suits[suit];
                                                                                   5 of Spades
                                                                                   Queen of Diamonds
    15
                                                                                  5 of Clubs
Queen of Clubs
    16
    17
        private:
                                                                                   Ace of Spades
                                                                                  King of Diamonds
8 of Spades
10 of Hearts
    18
            int face;
    19
             int suit;
    20 };
                                                                                   Jack of Hearts
                                                                                   6 of Diamonds
    21
                                                                                   7 of Diamonds
    22 std::vector<std::string> Card::faces = {"Ace", "2", "3", "4",
                                                                                   7 of Spades
         "5", "6", "7", "8", "9", "10", "Jack", "Queen", "King"};
                                                                                   10 of Diamonds
    23 std::vector<std::string> Card::suits = {"Hearts", "Diamonds",
                                                                                   2 of Hearts
                                                                                   2 of Clubs
         "Clubs", "Spades"};
                                                                                   4 of Diamonds
                                                                                   6 of Spades
    25 v class DeckOfCards {
                                                                                   Queen of Spades
C AI (A) C++
                                                                                   3 of Diamonds
                                           In 62 Cold Spaces 2 History 10 9 of Clubs
```

Q.No.2)

```
1 #include <iostream>
                                                                                Set 1: 0 50
                                                                                Set 1: 0 50
Set 2: 100
Set 3: 1 3 5 99
Union of Set 1 and Set 3: 0 1 3 5 50 99
Intersection of Set 1 and Set 3: ---
 2 #include <vector>
 4 v class IntegerSet {
                                                                                Set 1 is equal to Set 2: No
Set 1 is equal to Set 3: No
 5 private:
 6
      std::vector<bool> elements; // Vector of bools to represent
    the set
 7
 8 public:
      // Default constructor that initializes the set to be empty
10
       IntegerSet() : elements(101, false) {} // 101 elements for 0
    through 100
11
12
        // Constructor that initializes the set with an array of
    integers
13 🗸
         IntegerSet(const int arr[], int size) : elements(101, false)
14 🗸
              for (int i = 0; i < size; i++) {
15 ~
                 if (arr[i] >= 0 && arr[i] <= 100) {
16
                      elements[arr[i]] = true;
17
                  }
18
             }
19
         }
20
21
         // Insert an element into the set
22 🗸
         void insertElement(int element) {
23 v if (element >= 0 && element <= 100) {
```