Lottery Machine Coding Project

The goal of my project is to create a functioning lottery machine. I have created a code in a way where the user has to input 7 different numbers between 0 and 15. If the number is above 15 then the program will give an error and ask the user to choose again. Once the user inputs their numbers into the system, the computer will generate 7 random numbers. If the user's choice of numbers and the computer generated numbers match then the program specifies the amount of matches they have and also the prize money they receive. If the user gets all 7 matches right then they win a total of 150$.

Code:

```
#include <iostream>
#include <cstdlib>
#include <ctime>

// -- Constant Values --

int lotteryDigits = 15;
int SIZE = 7;

// -- Prototypes of different functions --

int generateLottery(int[], int, int);
int userInput(int[], int);
int matchCounter(int[], int[], int);
void displayNumbers(int[], int[]);
void winnerOrLoser(int);
bool checkArray(int array[], int size, int number);

// -- Main Code for Lottery Machine program --

using namespace std;

int main()
{
	// -- Defining Variables --
	int lottery[7] = { 0, 0, 0, 0, 0, 0, 0 };
	int user[7] = { 0, 0, 0, 0, 0, 0, 0 };
	int matches = 0;


	generateLottery(lottery, SIZE, lotteryDigits);

	userInput(user, SIZE);
```

```
	matches = matchCounter(lottery, user, matches);


	displayNumbers(lottery, user);

	winnerOrLoser(matches);

	system("pause");
	return 0;
}

// -- Defining Functions --

int generateLottery(int lottery[], int, int)
{
	unsigned seed = time(0);
	srand(seed);

	for (int y = 0; y < SIZE; y++)
	{
		lottery[y] = rand() % lotteryDigits;
	}

	return lottery[0], lottery[1], lottery[2], lottery[3],
lottery[4], lottery[5], lottery[6];
}

// -- Lottery Machine Instructions for input user --

int userInput(int user[], int)
{
	cout << "WELCOME TO THE LOTTERY MACHINE!\n\n";
	cout << "You have to input 7 numbers between 0 and 15. If your
inputted numbers match with the computer generated numbers then you can
win money!\n";
	cout << "\nPrize money according to matches:\n";
	cout << "\n|" << "1 Match" << "=" << "5$" << "|" << endl;
	cout << "|" << "2 Matches" << "=" << "10$" << "|" << endl;
	cout << "|" << "3 Matches" << "=" << "20$" << "|" << endl;
	cout << "|" << "4 Matches" << "=" << "35$" << "|" << endl;
	cout << "|" << "5 Matches" << "=" << "50$" << "|" << endl;
	cout << "|" << "6 Matches" << "=" << "80$" << "|" << endl;
	cout << "|" << "7 Matches" << "=" << "150$" << "|" << endl;

	for (int y = 0; y < SIZE; y++)
	{
		printf("\n# %d of 7 Enter any number between 0 and 15:  ", y
+ 1);

		cin >> user[y];
```

```
            while (user[y] < 0 || user[y]>15)
            {
                  cout << "Please enter again, number must be between 0
and 15: ";
                  cin >> user[y];
            }
      }

      return user[0], user[1], user[2], user[3], user[4], user[5],
user[6];
}

// -- Match Counter program --

int matchCounter(int lotto[], int input[], int)
{
      int match = 0;
      int duplicates[7] = { -1,-1,-1,-1,-1,-1,-1 };

      for (int x = 0; x < SIZE; ++x)
      {
            if (!checkArray(duplicates, 7, input[x]))
            {
                  if (checkArray(lotto, 7, input[x]))
                        match = match + 1;
                  duplicates[x] = input[x];
            }
      }

      return match;
}

bool checkArray(int array[], int size, int number)
{
      bool has = false;
      for (int i = 0; i < size; i++)
      {
            if (array[i] == number)
            {
                  has = true;
            }
      }
      return has;
}

// -- Tells input user the numbers they have inputted and the winning
numbers --

void displayNumbers(int lottery[], int user[])
{
```

```
	cout << "\nYour lottery numbers are: " << user[0] << " " <<
user[1] << " " << user[2] << " " << user[3] << " " << user[4] << " " <<
user[5] << " " << user[6] << endl;

	cout << "\nThe winning lottery numbers are: " << lottery[0] << "
" << lottery[1] << " " << lottery[2] << " " << lottery[3] << " " <<
lottery[4] << " " << lottery[5] << " " << lottery[6] << endl;

}

// -- Tells the input user the amount of matches they have and the
prize money they won according to the matches --

void winnerOrLoser(int matches)
{
	cout << "You have matched with " << matches << " numbers, you
have won = ";

	if (matches != SIZE)

		switch (matches) {
		case 0:
			cout << "0$" << endl;
			break;
		case 1:
			cout << "5$" << endl;
			break;
		case 2:
			cout << "10$" << endl;
			break;
		case 3:
			cout << "20$" << endl;
			break;
		case 4:
			cout << "35$" << endl;
			break;
		case 5:
			cout << "50$" << endl;
			break;
		case 6:
			cout << "80$" << endl;
			break;
		case 7:
			cout << "150$" << endl;
			break;
		}
}
```