MIDTERM

Code

```java
import java.util.Arrays;
import java.util.Collections;
import java.util.Scanner;
public class App {
    //Not my best code. This is for school.
    private static final String CLS = "\033[H\033[2J";
    private static final String BM9 = "Bet Machine 9000";
    private static final String HORSE = "horse";
    private static int choice;
    public static void main(String[] args) throws Exception{
        System.out.print(CLS);
        System.out.flush();
        System.out.println(BM9);
        Thread.sleep(1000);
        System.out.print(CLS);
        System.out.flush();
        Thread.sleep(1000);
        System.out.println(BM9);
        Thread.sleep(1000);
        System.out.print(CLS);
        System.out.flush();
        Thread.sleep(1000);
        System.out.println(BM9);
        Thread.sleep(1000);
        System.out.print(CLS);
        System.out.flush();
        Thread.sleep(2000);
        int winlose = 0;
        int horserun=4;
        int money=200;
        int racerun=0;
        int efplace=0;
        int esplace=0;
        int ebfplace=0;
        int ebsplace=0;
        int tfplace=0;
        int tsplace=0;
        int ttplace=0;
        int tbfplace=0;
        int tbsplace=0;
        int tbtplace=0;
        int win1=5;
        int win2=5;
        int win3=5;
        int win4=5;
        int play=1;
        int cheat=0;
        int operator=0;
```

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        String fph = "Choose 1st Place Horse: ";
        String sph = "Choose 2nd Place Horse: ";
        String tph = "Choose 3rd Place Horse: ";
        Scanner input = new Scanner(System.in);
do {
    do {
                    System.out.println("~~Main Menu~~");
                    Integer[] arr = new Integer[horserun];
                    for (int i = 0; i < arr.length; i++) {
                        arr[i] = i;
                    }
                    String hrn = "Horses: " + Arrays.toString(arr);
                    System.out.println("You have $" + money);
                    if (money <= 0) {
                        System.out.println("You have run out of money. Submitting bet.\n\n");
                        choice = 9;
                    } else {
                        System.out.println("1)    Exacta Bet ($10)");
                        System.out.println("2)    Exactabox Bet ($5)");
                        System.out.println("3)    Trifecta Bet ($25)");
                        System.out.println("4)    Trifectabox Bet ($20)");
                        System.out.println("8)    Operator Menu");
                        System.out.println("9)    SUBMIT BET");
                        choice = input.nextInt();
                    }

                    switch (choice) {
                        case 1:
                            money = money-10;
                            System.out.println(hrn);
                            System.out.print(fph);
                            efplace = input.nextInt();
                            System.out.print(sph);
                            esplace = input.nextInt();
                                break;

                        case 2:
                            money = money-5;
                            System.out.println(hrn);
                            System.out.print(fph);
                            ebfplace = input.nextInt();
                            System.out.print(sph);
                            ebsplace = input.nextInt();
                                break;

                        case 3:
                            money = money-25;
                            System.out.println(hrn);
                            System.out.print(fph);
                            tfplace = input.nextInt();
                            System.out.print(sph);
                            tsplace = input.nextInt();
                            System.out.print(tph);
                            ttplace = input.nextInt();
                                break;
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case 4:
    money = money-20;
    System.out.println(hrn);
    System.out.print(fph);
    tbfplace = input.nextInt();
    System.out.print(sph);
    tbsplace = input.nextInt();
    System.out.print(tph);
    tbtplace = input.nextInt();
        break;
case 8:

    if (cheat == 0) {
        System.out.println("This race's results:");
        for (int i = 0; i < arr.length; i++) {
            arr[i] = i;
        }
        Collections.shuffle(Arrays.asList(arr));
        System.out.println(Arrays.toString(arr));
        win1 = arr[0];
        win2 = arr[1];
        win3 = arr[2];
        win4 = arr[3];
        System.out.println("1)    Add/Subtract Contestants");
        System.out.println("9)    Return to main menu");
        operator = input.nextInt();
        if (operator==1) {
            System.out.print("Input number of horses: ");
            horserun = input.nextInt();
            arr = new Integer[horserun];
            for (int i = 0; i < arr.length; i++) {
                arr[i] = i;
            }
        }
        break;
    } else {
        System.out.println("This race's results:");
        System.out.println(Arrays.toString(arr));
        cheat = 1;
        break;
    }


case 9:
if (cheat == 0) {

        for (int i = 0; i < arr.length; i++) {
            arr[i] = i;
        }
        Collections.shuffle(Arrays.asList(arr));
        //System.out.println(Arrays.toString(arr));
        win1 = arr[0];
        win2 = arr[1];
        win3 = arr[2];
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                            win4 = arr[3];
                            racerun++;

                    }else{
                        racerun++;
                    }       break;

                    default:
                    System.out.println("Please choose a number from the list. Returning to
Main Menu...");
                    Thread.sleep(5000);
                    System.out.print(CLS);
                    System.out.flush();
                    Thread.sleep(500);
                        break;
                }
    } while (racerun == 0);

            if (win1 == efplace && win2 == esplace) {
                System.out.println("YOU WON THE EXACTA BET!\n");
                money = money+100;
                winlose++;
            }
            if ((win1 == ebfplace && win2 == ebsplace) || (win1 == ebsplace && win2 ==
ebfplace)) {
                System.out.println("YOU WON THE EXACTABOX BET!\n");
                money = money+50;
                winlose++;
            }
            if (win1 == tfplace && win2 == tsplace && win3 == ttplace){
                System.out.println("YOU WON THE TRIFECTA BET!\n");
                money = money+200;
                winlose++;
            }
            if ((win1 == tbfplace && win2 == tbsplace && win3 == tbtplace) || (win1 ==
tbsplace && win2 == tbfplace && win3 == tbtplace) || (win1 == tbtplace && win2 == tbfplace &&
win3 == tbsplace) || (win1 == tbfplace && win2 == tbtplace && win3 == tbsplace) || (win1 ==
tbsplace && win2 == tbtplace && win3 == tbfplace) || (win1 == tbtplace && win2 == tbsplace &&
win3 == tbfplace)){
                System.out.println("YOU WON THE TRIFECTA BOX BET!\n");
                money = money+150;
                winlose++;
            }
            if (winlose == 0) {
                System.out.println("You lost $" + (200-money));
            }
            System.out.println("Winning positions: ");
            System.out.println("First : " + HORSE + win1);
            System.out.println("Second: " + HORSE + win2);
            System.out.println("Third: " + HORSE + win3);
            System.out.println("Fourth: " + HORSE + win4 + "\n");
            System.out.println("Final Balance: $" + money + "\n");
            if (money <= 0) {
                System.out.println("You have run out of money.");
                break;
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                }
            System.out.println("Play again? (0,1)");
            play = input.nextInt();
             winlose = 0;
             racerun=0;
             efplace=0;
             esplace=0;
             ebfplace=0;
             ebsplace=0;
             tfplace=0;
             tsplace=0;
             ttplace=0;
             tbfplace=0;
             tbsplace=0;
             tbtplace=0;
             win1=5;
             win2=5;
             win3=5;
             win4=5;
             cheat=0;
            System.out.print(CLS);
            System.out.flush();
} while (play == 1);
input.close();
        }
}
```

Terminal

```
~~Main Menu~~
You have $200
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
1
Horses: [0, 1, 2, 3]
Choose 1st Place Horse: 1
Choose 2nd Place Horse: 2
~~Main Menu~~
You have $190
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
4
Horses: [0, 1, 2, 3]
Choose 1st Place Horse: 1
Choose 2nd Place Horse: 2
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Choose 3rd Place Horse: 3
~~Main Menu~~
You have $170
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
9

~~Main Menu~~
You have $320
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
8
This race's results:
[2, 1, 3, 0]
1)      Add/Subtract Contestants
9)      Return to main menu
1
Input number of horses: 10
~~Main Menu~~
You have $320
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
8
This race's results:
[8, 7, 1, 3, 4, 0, 9, 5, 6, 2]
1)      Add/Subtract Contestants
9)      Return to main menu
9
~~Main Menu~~
You have $320
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
3)      Trifecta Bet ($25)
4)      Trifectabox Bet ($20)
8)      Operator Menu
9)      SUBMIT BET
1
Horses: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
Choose 1st Place Horse: 8
Choose 2nd Place Horse: 7
~~Main Menu~~
You have $310
1)      Exacta Bet ($10)
2)      Exactabox Bet ($5)
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3)     Trifecta Bet ($25)
4)     Trifectabox Bet ($20)
8)     Operator Menu
9)     SUBMIT BET
3
Horses: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
Choose 1st Place Horse: 8
Choose 2nd Place Horse: 7
Choose 3rd Place Horse: 1
~~Main Menu~~
You have $285
1)     Exacta Bet ($10)
2)     Exactabox Bet ($5)
3)     Trifecta Bet ($25)
4)     Trifectabox Bet ($20)
8)     Operator Menu
9)     SUBMIT BET
9
YOU WON THE EXACTA BET!

YOU WON THE TRIFECTA BET!

Winning positions:
First : horse 8
Second: horse 7
Third: horse 1
Fourth: horse 3

Final Balance: $585

Play again? (0,1)
0
```