**JS Advanced Exam**

**Problem 3. Unit Testing**

**Your Task**

Using **Mocha** and **Chai** write **JS Unit Tests** to test a variable named **lottery**, which represents an object. You may use the following code as a template:

|  |
| --- |
| describe(**"*Tests* …"**, **function**() {  describe(**"*TODO* …"**, **function**() {  ***it***(**"*TODO …*"**, **function**() {  *//* ***TODO:*** …  });  });  *//* ***TODO:*** …  }); |

The object that should have the following functionality:

* **buyLotteryTicket (ticketPrice,ticketCount,buy) -** A function that accepts **three** parameters: **number**, **number**, and **boolean**.
* There is a **need for validation** for the input, in case of submitted **invalid** parameters, **throw** an error **"Invalid input!"**
* If the value of the boolean **buy** is **false**, **throw** an error:

**"Unable to buy lottery ticket!"**

* To be valid, the **ticket purchase** must meet the **following requirement**:
  + If the **ticketPrice** is **greater** than **0**, and **ticketCount** is **greater** or **equal** to **1, a**nd the type of **ticketPrice** and **ticketCount**  **is number, return** the string:

**"You bought ${ticketCount} tickets for ${totalPrice}$."**,

where totalPrice is ticketPrice multiplied by ticketCount.

* **checkTicket (ticketNumbers,luckyNumbers) -** A function that accepts two parameters: **array** and **array.**
  + There is a **need for validation** for the input, in case of submitted **invalid** parameters, **throw** an error **"Invalid input!"**
  + To be valid, the **ticket** must meet the **following requirement**:
    - Both **ticketNumbers** and **luckyNumbers** must be **arrays** with exact length of **6** numbers inside.
  + After validation the function compares the numbers from the ticket with the winning numbers.
    - If there is **from** **3** **to** **5** winning numbers in the ticket, **return** the following message:

**"Congratulations you win, check your reward!"**

* + - If **all 6** are winning numbers, **return** the following message:

**"You win the JACKPOT!!!"**

* **secondChance (ticketID, secondChanceWinningIDs) -** A function that accepts two parameters: **number** and **array**.
  + There is a **need for validation** for the input, in case of submitted **invalid** parameters, **throw** an error **"Invalid input!"**
  + To be valid, the **ticket** must meet the **following requirement**:
* **ticketID** must befrom type **number.**
* **secondChanceWinningIDs** must be **array**.
* After validation the function checks whether the **ticketID** is included in the **secondChanceWinningIDs** array.
  + If there is a match, **return** the following message:

**"You win our second chance price!"**

* + Else, **return** the following message:

**"Sorry, your ticket doesn't win!"**

**JS Code**

To ease you in the process, you are provided with an implementation that meets all of the specification requirements for the **lottery** object:

|  |
| --- |
| Lottery.js |
| const lottery = {   buyLotteryTicket(ticketPrice,ticketCount,buy){      if(buy == false) {          throw new Error("Unable to buy lottery ticket!");      }else{          if(ticketPrice <= 0 || ticketCount < 1 ||           typeof ticketPrice !== "number" || typeof ticketCount !== "number"){              throw new Error("Invalid input!");          }else{              let totalPrice = ticketPrice \* ticketCount;              return `You bought ${ticketCount} tickets for ${totalPrice}$.`          }      }  },   checkTicket(ticketNumbers,luckyNumbers) {      if (!Array.isArray(ticketNumbers) || !Array.isArray(luckyNumbers) ||       ticketNumbers.length != 6 || luckyNumbers.length != 6) {          throw new Error("Invalid input!");        }        let winningNumbers = 0;          for (let i = 0; i < ticketNumbers.length; i++) {              for (let j = 0; j < luckyNumbers.length; j++) {                  if (ticketNumbers[i] === luckyNumbers[j]) {                      winningNumbers++;        }      }    }    if(winningNumbers >= 3 && winningNumbers < 6){      return "Congratulations you win, check your reward!";    }else if(winningNumbers = 6){      return "You win the JACKPOT!!!";    }  },  secondChance(ticketID, secondChanceWinningIDs) {     if(typeof ticketID !== "number" || !Array.isArray(secondChanceWinningIDs)){      throw new Error("Invalid input!");     }     if (secondChanceWinningIDs.includes(ticketID)) {      return "You win our second chance price!";    } else {      return "Sorry, your ticket doesn't win!"    }  }  } |

**Submission**

Submit your tests inside a **describe()** statement, as shown above.