Presidential Initiative for Artificial Intelligence and Computing (PIAIC)

https://www.piaic.org

JavaScript Programming Assignment 2

Note: Check Rules end of document

1. Write a program to take "city" name as input from user. If user enters "Karachi", welcome the user like this: "Welcome to city of lights"

2. Write a program to take input color of road traffic signal from the user & show the message according to this table:

Signal color	Message
Red	Must Stop
Yellow	Ready to move
Green	Move now

3. Run this script, & check whether alert message would be displayed or not. Record the outputs.
   a. ```javascript
      var a = 4;
      if (++a === 5) {
              alert("given condition for variable a is true");
      }
      ```
   b. ```javascript
      var b = 82;
      if (b++ === 83){
              alert("given condition for variable b is true");
      }
      ```
   c. ```javascript
      var c = 12;
      if (c++ === 13){
              alert("condition 1 is true");
      }
      if (c === 13){
              alert("condition 2 is true");
      }
      if (++c < 14){
              alert("condition 3 is true");
      }
      if(c === 14){
              alert("condition 4 is true");
      }
      ```
   d. ```javascript
      var materialCost = 20000;
      var laborCost = 2000;
      var totalCost = materialCost + laborCost;
      if (totalCost === laborCost + materialCost){
              alert("The cost equals");
      }
      ```

e. if (true){
        alert("True");
   }
   if (false){
        alert("False");
   }
f. if("car" < "cat"){
        alert("car is smaller than cat");
   }

4. Write a program to take input the marks obtained in three subjects & total marks. Compute & show the resulting percentage on your page. Take percentage & compute grade as per following table:

Percentage %	Grade	Remarks
Greater than or equal to 80	A-one	Excellent
Greater than or equal to 70	A	Good
Greater than or equal to 60	B	You need to improve
Less than 60	Fail	Sorry

Show the total marks, marks obtained, percentage, grade & remarks like:

Marks Sheet

Total marks : 300
Marks obtained : 219
Percentage : 73%
Grade : B
Remarks : You need to improve

5. **Guess game**:
   Store a secret number (ranging from 1 to 10) in a variable. Prompt user to guess the secret number.
   a. If user guesses the same number, show "Bingo! Correct answer".
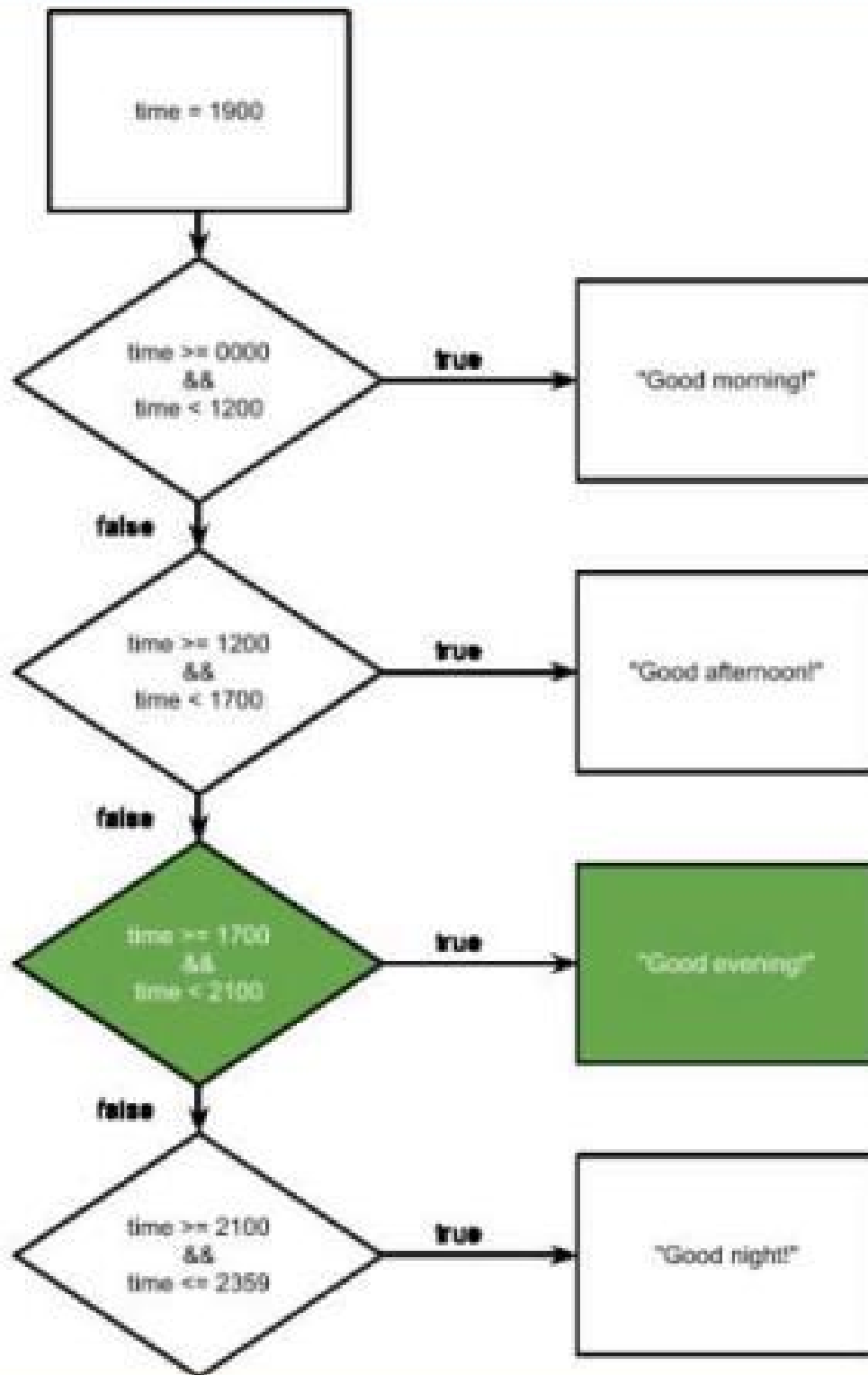   b. If the guessed number +1 is the secret number, show "Close enough to the correct answer".

6. Write a program that checks whether the given input is an even number or an odd number.

7. Write a program to create a calculator for +,-,*, / & % using if statements. Take the following input:
   a. First number
   b. Second number
   c. Operation (+, -, *, /, %)
   Compute & show the calculated result to user.

8. Write a program that takes input a number from user & state whether the number is positive, negative or zero.

9. Write a program that takes a character (i.e. string of length 1) and returns true if it is a vowel, false otherwise

10. Write a program that
    a. Store correct password in a JS variable.
    b. Asks the user to enter his/her password
    c. Validate the two passwords:
        i. Check if user has entered password. If not, then give the message " Please enter your password"
        ii. Check if both passwords are the same. If they are the same, show message "Correct! The password you entered matches the original password". Show "Incorrect password" otherwise.

11. Write a program that take time as input from user in 24 hours clock format like: 1900 = 7pm. Implement the following case using if, else & else if statements

```
time = 1900
```

```
time >= 0000
&&
time < 1200
```
→ true → "Good morning!"

false ↓

```
time >= 1200
&&
time < 1700
```
→ true → "Good afternoon!"

false ↓

```
time >= 1700
&&
time < 2100
```
→ true → "Good evening!"

false ↓

```
time >= 2100
&&
time <= 2359
```
→ true → "Good night!"

Rules for Assignment completion and submission

1) Each task should be in separate file
2) Files name should be the task name e.g task1, task2, task 3
   a) task1.html
   b) task1.js
3) You should upload your code on GitHub or google drive and share link for code review
4) All files in assignment should be in one folder and folder name should contains assignment number e.g assignment1_YourRollNo, assignment2_YourRollNo
   a) Create a folder
   b) Add all tasks file in this assignment folder
   c) Push code on github or upload folder on google drive
   d) Share github url or drive url for code review