



## 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. 

```
var a = 4;
if (++a === 5) {
    alert("given condition for variable a is true");
}
```
- b. 

```
var b = 82;
if (b++ === 83){
    alert("given condition for variable b is true");
}
```
- c. 

```
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. 

```
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”.

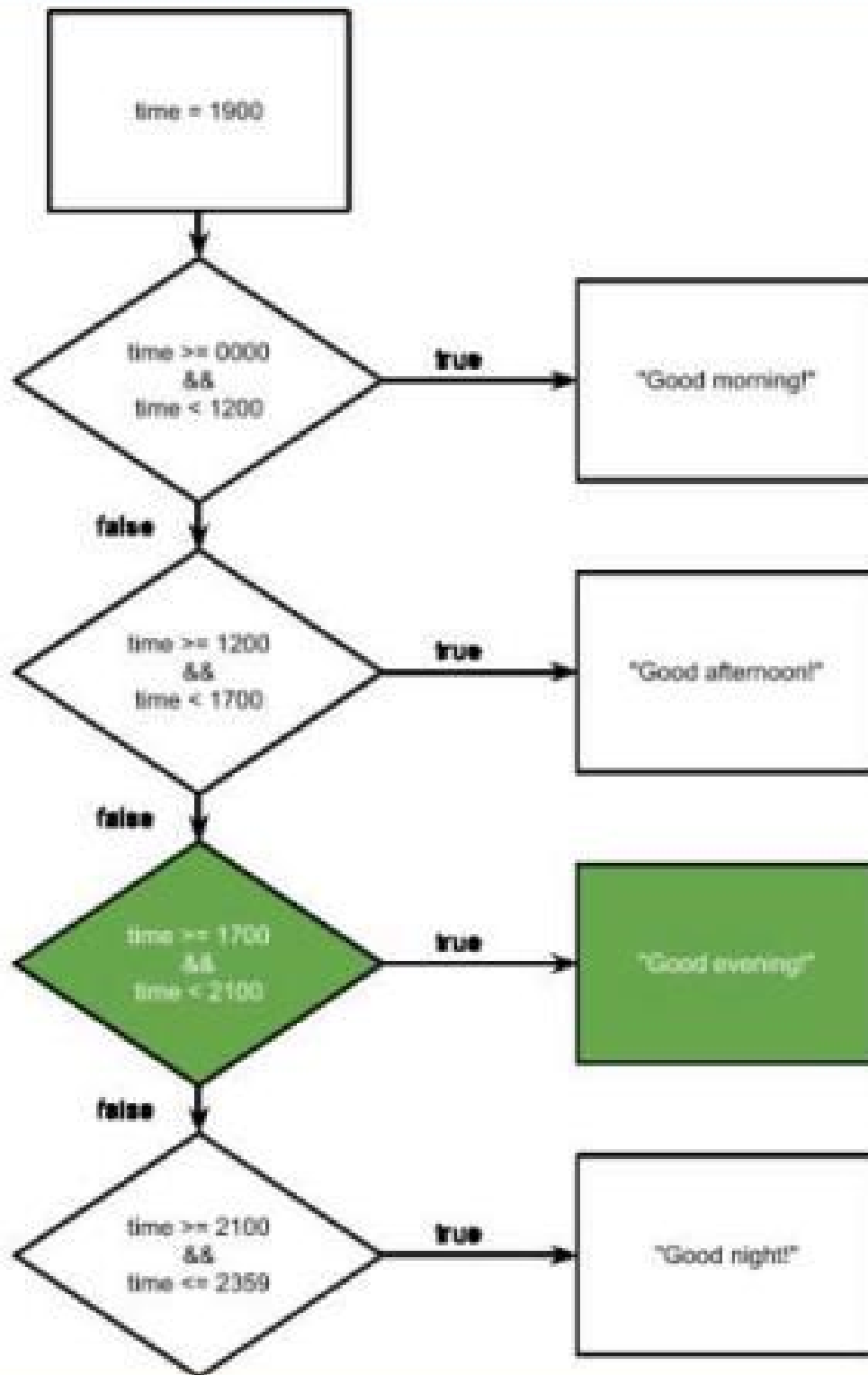
## 6. Write a program that checks whether the given input is an even number or an odd number.

## 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



## **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