MATH AND DATE METHODS

Assignment # 26-34

JAVASCRIPT

MODULE A - Mobile & Cloud Computing

| MATH METHODS | DATE METHODS|

1. Write a program that takes a **positive integer** from user & display the following in your browser.
    a. number
    b. round off value of the number
    c. floor value of the number
    d. ceil value of the number

```
number: 45
round off value: 45
floor value: 45
ceil value: 45
```

2. Write a program that takes a **negative integer** from user & display the following in your browser.
    a. number
    b. round off value of the number
    c. floor value of the number
    d. ceil value of the number

```
number: -32
round off value: -32
floor value: -32
ceil value: -32
```

3. Write a program that takes a **positive floating point** number from user & display the following in your browser.
    a. number
    b. round off value of the number
    c. floor value of the number
    d. ceil value of the number

```
number: 3.45214
round off value: 3
floor value: 3
ceil value: 4
```

4. Write a program that takes a **negative floating point** number from user & display the following in your browser.
    a. number
    b. round off value of the number
    c. floor value of the number
    d. ceil value of the number

```
number: -2.673
round off value: -3
floor value: -3
ceil value: -2
```

5. Write a program that displays the absolute value of a number. E.g. absolute value of -4 is 4 & absolute value of 5 is 5

```
The absolute value of -4 is 4
```

6. Write a program that simulates a dice using random() method of JS Math class. Display the value of dice in your browser.

```
random dice value: 4
```

```
random dice value: 6
```

7. Write a program that simulates a coin toss using random() method of JS Math class. Display the value of coin in your browser.

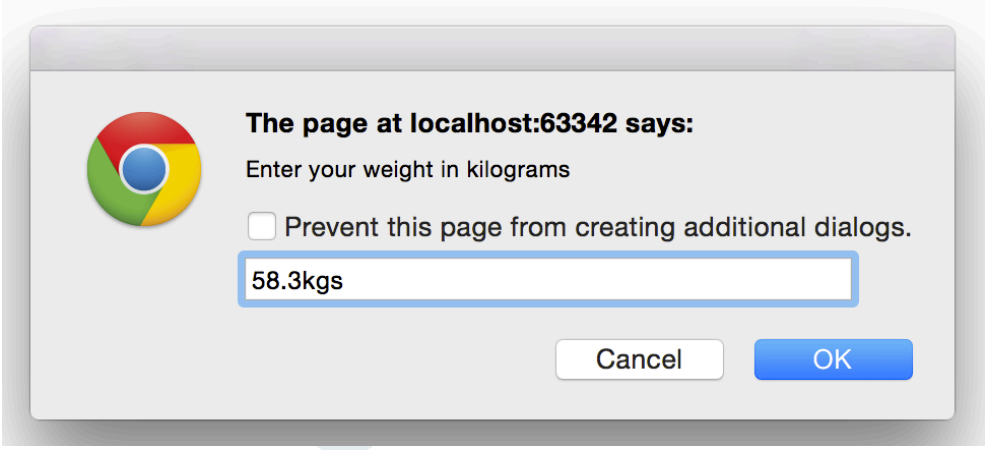
```
2
random coin value: Heads
```

```
1
random coin value: Tails
```

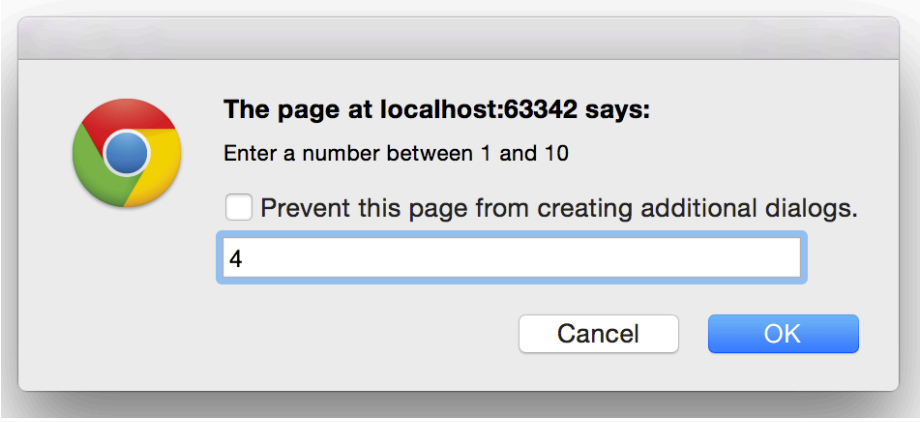
8. Write a program that shows a random number between 1 and 100 in your browser.

```
random number between 1 and 100: 84
```

9. Write a program that asks the user about his weight. Parse the user input and display his weight in your browser. Possible user inputs can be:
    a. 50
    b. 50kgs
    c. 50.2kgs
    d. 50.2kilograms



10. Write a program that stores a random secret number from 1 to 10 in a variable. Ask the user to input a number between 1 and 10. If the user input equals the secret number, congratulate the user.



11. Write a program that displays current date and time in your browser.

```
Sat Dec 05 2015 22:18:39 GMT+0500 (PKT)
```

12. Write a program that alerts the current month in words. For example December.

```
Current month: December
```

13. Write a program that alerts the first 3 letters of the current day, for example if today is Sunday then alert will show Sun.

```
Today is Sat
```

14. Write a program that displays a message “It’s Fun day” if its Saturday or Sunday today.

```
It's Fun day
```

15. Write a program that shows the message “First fifteen days of the month” if the date is less than 16th of the month else shows “Last days of the month”.

```
First fifteen days of the month
```

16. Write a program that determines the minutes since midnight, Jan. 1, 1970 and assigns it to a variable that hasn't been declared beforehand. Use any variable you like to represent the Date object.

```
Current Date: Sat Dec 05 2015 22:32:23 GMT+0500 (PKT)
Elapsed milliseconds since January 1, 1970: 1449336743386
Elapsed minutes since January 1, 1970: 402593.53982944443
```

17. Write a program that tests whether it's before noon and alert “Its AM” else “its PM”.

```
It's PM
```

18. Write a program that creates a Date object for the last day of the last month of 2020 and assigns it to variable named **laterDate**

```
Later date: Thu Dec 31 2020 00:00:00 GMT+0500 (PKT)
```

19. Create a date object of the starting date of this Ramadan and alert the number of days past since 1st Ramadan?
Note: 1st Ramadan was on June 18, 2015

```
171 days have passed since 1st Ramadan, 2015
```

20. Write a program that displays in your browser the seconds that elapsed between the reference date and the beginning of 2015.

```
On reference date Sat Dec 05 2015 22:50:16 GMT+0500 (PKT),
488091 seconds had passed since beginning of 2015
```

21. Create a Date object for the current date and time. Extract the hours, reset the date object an hour ahead and finally display the date object in your browser.

```
current date: Sat Dec 05 2015 23:08:16 GMT+0500 (PKT)
1 hour ago, it was Sat Dec 05 2015 22:08:16 GMT+0500 (PKT)
```

22. Write a program that creates a date object and show the date in an alert box that is reset to 100 years back?

```
current date: Sat Dec 05 2015 23:09:37 GMT+0500 (PKT)
100 years back, it was Sun Dec 05 1915 23:09:37 GMT+0500 (PKT)
```

23. Write a program to ask the user about his age. Calculate and show his birth year in your browser.

```
Your age is 21
Your birth year is 1994
```

24. Write a program to generate your K-Electric bill in your browser. All the amounts should be rounded off to 2 decimal places. Display the following fields:
    a. Customer Name
    b. Current Month
    c. Number of units
    d. Charges per unit
    e. Net Amount Payable (within Due Date)
    f. Late Payment Surcharge
    g. Gross Amount Payable (after Due Date)

    Where,
    Net Amount Payable (within Due Date) = Number of units * Charges per unit
    &

Gross Amount Payable (after Due Date) = Net Amount + Late Payment Surcharge

K-Electric Bill

Customer Name: **Wajiha Kanwal**
Month: **December**
Number of units: **450**
Charges per unit: **14**

Net Amount Payable (within Due Date): **6300**
Late payment surcharge: **500**
Gross Amount Payable (after Due Date): **6800**

-- END --