

Webster Onsite Round

Instructions:

1. You can only use the files and libraries provided to you.
2. Bonus marks for creativity and error handling.
3. Scoring is partial, do as much as you can.
4. Evaluate your work with any of the coordinators as you complete.
5. For SQL and schema questions, you do not have to run it on the SQL server, write it on the sheets provided to you.
6. Try to do all the **Freebie** Questions, as they will help you score marks.

Questions:

1. As we all know that our Dean god, Venkatesh Beti is very lazy but still, he works very hard in the Dean Webteam. Now, he has just created 1000 different URLs and he wants to remember all of them. Help him develop a URL shortener which will take a URL as an input and notify the user of the shortened URL. When the shortened URL is entered, the original URL should open.

Send a GET request with the input URL and custom URL and display the unique shortened URL. On opening the shortened URL, the original URL should open. If there is any error, notify the user. If the output URL is already allotted to other URL, then the user should be notified of that. If no output field is provided, then a random URL should be generated.

127.0.0.1/beti?input=https://academics.mnnit.ac.in&output=acad
127.0.0.1/beti?input=https://academics.mnnit.ac.in

e.g.: original URL: https://academics.mnnit.ac.in
Shortened URL: 127.0.0.1/beti?url=acad (if custom URL is acad)

OR

127.0.0.1/beti?url=s4qtr (random URL is generated, if custom is not provided)

On opening 127.0.0.1/beti?url=acad, https://academics.mnnit.ac.in should be opened.

(30 Marks)

2. Juggu and Beti's Dean Webteam Juniors are very "*KaamChor*" and Juggu and Beti have to do all the work themselves. One day, Bhadage and Milan decided to test the skills of the Junior webteam and gave them this task:

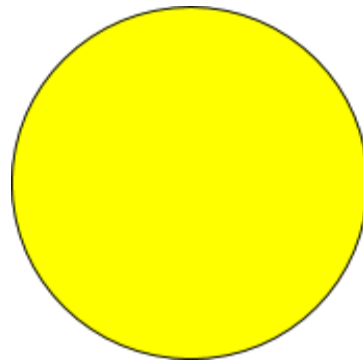
Create a red square box of dimensions 100X100px with some text inside it. When the square is clicked, the square box should slowly become a circle of yellow color with radius 200px and the text should fade and disappear. As the juniors are "*KaamChor*", you have to help your friends who are in Webteam to complete the task as they tell you the result before the result day!!!

(15 Marks)

E.g.: Before clicking the box:



After clicking the box:



-
3. Design a Horizontal Navbar using CSS (Try to make it creative and responsive)

(10 Marks)

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4. A. Create an Image Gallery (Try to make it creative and responsive)
B. By uploading the new images and storing them and retrieving after reload.

(10 + 15 Marks)

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5. Our gujju boy Milan is good in calculations when it's a matter of money :P. His roommate, Juggu thought of giving him hope that he'll become a billionaire one day. So he gave him a very big calculation but Milan has never calculated such a huge amount, so our gujju boy needs your help to design a calculator. You being his friend has to help him build a functional basic calculator.

(Extra points for extra scientific features).

(10 + 2*n Marks)

6. A. Design a register and login portal containing the following inputs:
Name, email, phone, password, confirm password, gender, registration number, mobile number, etc.
Just display all the details after login.
(proper handling of all data and security checks expected like SQL injections, client and serverside hashing of passwords, etc. Use as much handling as you can)
B. Implement **Remember Me** feature.

(20 + 10 Marks)

7. You need to design a JS functionality using browser storage in which there will be a clickable button each time you click button a counter will display current button click count to user but as you know js work will be destroyed as you close the tab you need to make it persistent i.e. whenever you again open that URL click count must be resumed what it was at last time.

(15 Marks)

8. Raizu is not good at keeping track of time. So he decides to make a timer on his browser where he enters the message and the event time. He wants a timer such that when the timer ends, the message is popped up as an alert(The timer will be in the form of a countdown). As Raizu is a playboy, he has a date today, so he assigns you the task of making this timer. Help Raizu!!!

(10 Marks)

9. Create a database for notifications.
Create a list in which the notifications should be fetched from the DB and displayed in descending order of entry. Also, create a text area where the user will type a new notification and on submitting, the list should display the new notification at the top of all other notifications **without reloading the page**. When the page is reloaded, it should display all the notifications including the new one.

(30 Marks)

10. Om Raj loves to upload different files but doesn't know their type and size. Create a page to upload a file and on uploading, print the following details on the browser:

```
{"name":"beti.pdf","type":"application/pdf","size":246067}
```

(10 Marks)

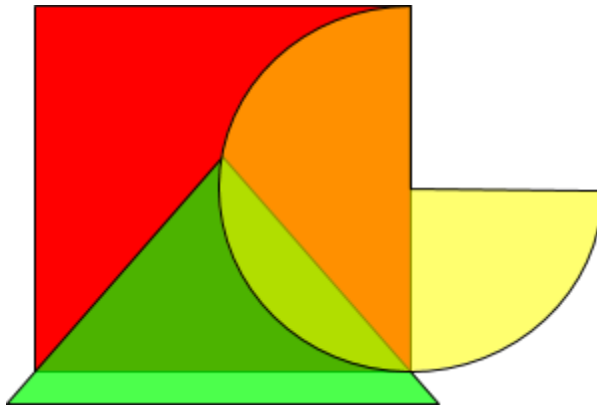
11. You need to send a HTTP request (any type) to a fixed end point and print (dump) the received request header.

e.g. :

```
{"ipaddress":"159.20.69.100","language":"en-US,en;q=0.5",  
"software":"Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:50.0) Gecko/20100101  
Firefox/50.0"}
```

(10 Marks)

12. Bhadage loves to play Pacman with Raizu. Raizu hates to play Pacman :P, so Raizu decided to give Bhadage the challenge to build this shape using only CSS and HTML as Bhadage is bad in frontend designing. (Assume Square to be at the back and triangle in the middle)



(25 Marks)

13. Design a book store website database schema considering these features:

- User can register on the website
- User can log in on the website
- List of books with all details
- Checkout facility
- User dashboard showing user's purchase history and other details i.e. stored address, etc.

Based on the schema just write the SQL queries for these questions:

- List all the books with ascending order of price
- List all books with author name starting with 'A'
- Show the sum of total spendings of all users with username, total spendings
- Show the count of books according to language
Like English - 5
Hindi - 10
Spanish - 0
- Show the names of all users who have total spendings more than 5000 rs.

(10 + 2*n Marks)

14. E-Cell MNNIT's Webteam is very good in frontend (at least they do all the work). But they don't like backend so they don't contribute to the registration portal. So the team leads, Bhadage and Raizu gave them the task of writing SQL queries. As Renaissance needs really good developers and you don't want your friends to lose their position in the Webteam, help them write the following queries:

(5 + 10 + 5 + 10 Marks)

A. Student (regno, semester, department, cpi)

Print regno of second highest cpi student in each semester department wise

B. Employee (name, sex, salary, deptName)

Find the 3rd highest salary from the table.

(a) using limit

(b) without using limit

C. employee(empld, name, department, salary)

Assuming that department = 5 has more than one employee, and we want to find the employees who get a higher salary than anyone in department 5.

D. Suppliers(sid:integer, sname:string, city:string, street:string)

Parts(pid:integer, pname:string, color:string)

Catalog(sid:integer, pid:integer, cost:real)

Find the names of all suppliers who have supplied a non-blue part.

FreeBies:

1. Make a button `Show time`. By clicking this button it should alert the current Date and time
(e.g. Sat Sep 14, 2019, 17:56:41 GMT+0530 (India Standard Time))

(2 Marks)

2. Print 10 random numbers using JS on the HTML page

(2 Marks)

3. Design an input that only accepts the birth month and birth year

(2 Marks)

4. Design an input that only accepts integer from 1-10

(2 Marks)

5. Print This words in an HTML page:

`H2O`

`E=mc2`

` `

`A piece of computer code`

(2 Marks)

6. This paragraph
contains a lot of spaces
in the source code,
but the browser
ignores it.

Print this paragraph as it is in HTML page

(1 Marks)

7. Print this line on an HTML page:

webster is the best

Use CSS only to change this text to capital letters on hovering the text

(2 Marks)

8. Make a disabled text input on HTML page

(2 Marks)

9. For the given schema:

myTable(UserID,UserName,UserAge)

- Write an SQL query to sort the users on the basis of age
- Write an SQL query to print the name and age of user with UserID=9

(1 + 1 Marks)

10. Make a table like this

(2 Marks)

Firstname	Lastname	Age
Vaibhav	Raizu	69
Bhadage	Bhodu	42
Venkatesh	Beti	66

11. Make a table like this

(3 Marks)

Name	Telephone	
Om Raj	8369312545	7548556945

12.

- Create a javascript prompt alert box and let the user add the text into the prompt box and show that text to the HTML page
- Create a js confirmation alert box if the user presses cancel then print "I pressed cancel" otherwise print "I pressed okay".

(3+2 Marks)

13. Make this type of list in HTML:

1. One
2. Two
 - A. Two-A
 - B. Two-B
 - C. Two-C
 - I. Two-C-1
 - II. Two-C-2
 - III. Two-C-3
 - IV. Two-C-4
 - D. Two-D
3. Three

(3 Marks)

All the best!!!