

Q: Create a dynamic web application using NodeJs, Express and JADE that performs following action:-

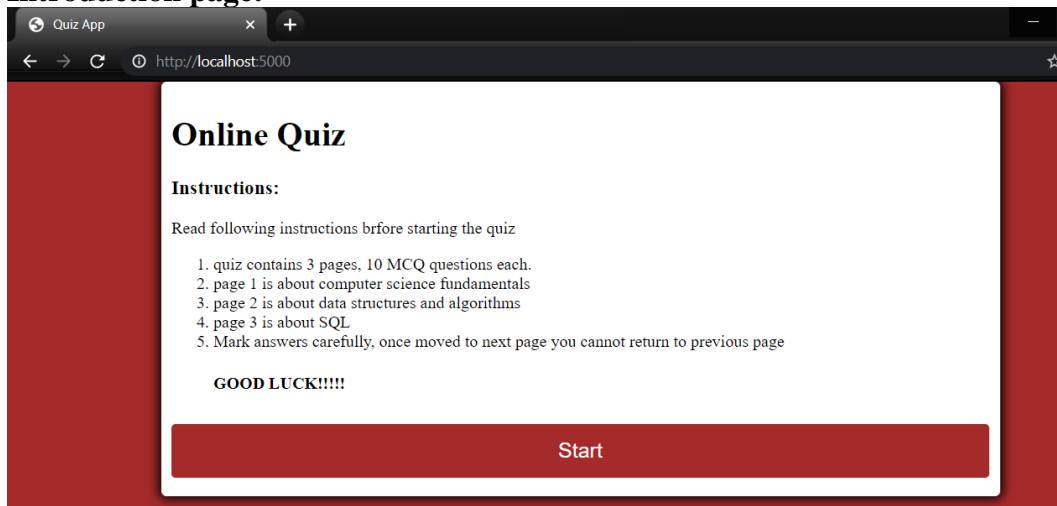
- The main page of the application display 5 or 10 questions with multiple choice answers to each question. User can select only one answer from the given answers.
- Once user has finished all the questions on the page, "Next" button at the end of the page takes user to next page. A JSON is passed to next page with information relate to current and wrong answers by the user.
- There should be 3 to 4 pages in total in the Quiz page.
- Once, user reaches the last page, once user clicks Next Button, it shows the result with information like Total Correct, total incorrect answers.

Details:

- The application contains 5 pages: 1 introduction, 1 result and 3 Quiz question pages.
- All pages use "sample.jade" template for view with attached css.
- Data is populated in the pages from "server.js" and "app.js" files
- All the questions and option are saved in "questions&answers.json" file.
- On each next click a json is passed that contain selected option details and is appended in "result.json" file mentioned in "getData()" function in "server.js" file.
- Only one option is selected from any four options and all the questions are checked to be answered when page is submitted.
- Result is displayed using "result.json" file.
- Restart button in the last page redirects to the home page to take the quiz again.

Output:

Introduction page:



After clicking start page 1 is loaded:

Quiz App

http://localhost:5000/part1

Online Quiz

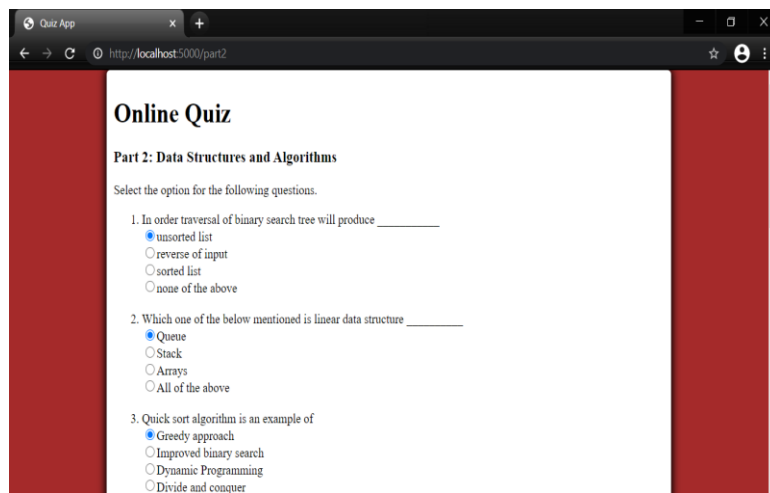
Part 1: Computer Fundamentals

Select the option for the following questions.

- Which among the following is not a type of printer?
 - ☐ LCD Printer
 - ☐ Laser Printer
 - ☐ Inkjet Printer
 - ☐ Electro Thermal Printer
- The computer malware that disguises users by representing itself as legitimate software/program is known as ...
 - ☐ Virus
 - ☐ Worms
 - ☐ Trojans
 - ☐ Spyware
- Which among the following controls all parts of the computer and known as the brain of computer?
 - ☐ RAM
 - ☐ ROM
 - ☐ CPU
 - ☐ Processor
- If the operating system of a computer stop working while working on this, usually what does a user do?
 - ☐ Leave it
 - ☐ Restart it
 - ☐ Format it
 - ☐ Throw it
- The Second Generation Computer used ...
 - ☐ Transistors
 - ☐ Integrated circuit
 - ☐ Vacuum tube
 - ☐ Chip
- If you need to cut the contents of MS Word, which command will you give?
 - ☐ Ctrl + X
 - ☐ Ctrl + C
 - ☐ Ctrl + V
 - ☐ Ctrl + Z
- Who among the following has designed the JavaScript programming language?
 - ☐ Rasmus Lerdorf
 - ☐ Guido van Rossum
 - ☐ Brendan Eich
 - ☐ James Gosling
- Which among the following is the shortcut key to save word file in your computer system?
 - ☐ F8
 - ☐ F12
 - ☐ F10
 - ☐ Ctrl + Alt + 0
- Which among the following is the shortcut key to open a new window?
 - ☐ Shift + N
 - ☐ Ctrl + N
 - ☐ Alt + N
 - ☐ Alt + F5
- The 'P' in CPU stands for ...
 - ☐ Process
 - ☐ Program
 - ☐ Performance
 - ☐ Plan

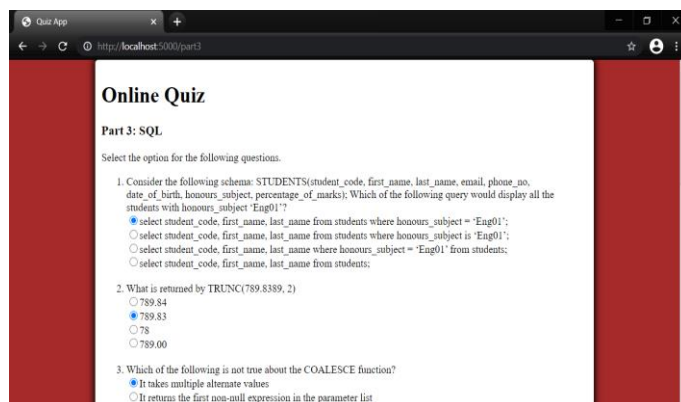
Next

After clicking next page 2 is loaded and data is added to result.json:



```
{
  "table": [
    {
      "page_Number": 1,
      "Correct_Answers_List": [
        "LCD Printer",
        "Trojans",
        "CPU",
        "Restart it",
        "Transistors",
        "Ctrl + X",
        "Brendan Eich",
        "F12",
        "Ctrl + N",
        "Process"
      ],
      "Selected_Answers_List": [
        "LCD Printer",
        "Virus",
        "RAM",
        "Leave it",
        "Transistors",
        "Ctrl + X",
        "Rasmus Lerdorf",
        "F8",
        "Shift + N",
        "Process"
      ],
      "correctAnswerQuestions": 4,
      "wrongAnswerQuestions": 6
    }
  ]
}
```

After clicking next page 3 is loaded and data of page 2 is added to result.json:



```
},
{
  "page_Number": 2,
  "Correct_Answers_List": [
    "sorted list",
    "All of the above",
    "Divide and conquer",
    "1.44 log n",
    "O(|V|+|E|)",
    "Heapify a Binary Heap",
    "node.next inaccessible",
    "execute infinitely",
    "Depth First Search",
    "linear search"
  ],
  "Selected_Answers_List": [
    "unsorted list",
    "Queue",
    "Greedy approach",
    "0.97 log n",
    "O(|V|)",
    "Heapify a Binary Heap",
    "node.next inaccessible",
    "obtain progressive approach",
    "Either BFS or DFS",
    "none of the above"
  ],
  "correctAnswerQuestions": 2,
  "wrongAnswerQuestions": 8
}
]
```

After clicking next resultPage is loaded and data of page 3 is added to result.json:

Online Quiz

Result:

Your Scoreboard is as follows

Page no: 1
Correct Answers:
LCD Printer,Trojans,CPU,Restart it,Transistors,Ctrl + X,Brendan Eich,F12,Ctrl + N,Process
Selected Answers:
LCD Printer,Spyware,RAM,Leave it,Chip,Ctrl + V,James Gosling,Ctrl + Alt + 0,Alt + F5,Plan
No of Correct Answers:1
No of Wrong Answers:9

Page no: 2
Correct Answers:
sorted list,All of the above,Divide and conquer, $1.44 \log n$, $\Theta(V|E|)$,Heapify a Binary Heap,node.next inaccessible,execute infinitely,Depth First Search,linear search
Selected Answers:
unsorted list,Queue,Greedy approach, $0.97 \log n$, $\Theta(V|E|)$,Searching in Hash Table,node.next.next inaccessible,not be executed,Breadth First Search,linear search
No of Correct Answers:2
No of Wrong Answers:8

Page no: 3
Correct Answers:
select student_code, first_name, last_name from students where honours_subject = 'Eng01';,789.83,It returns the first value in the parameter list if it is null,All are true.,The result of the main query is returned to the subquery.,When a table is deleted,All of the above,A foreign key value cannot be null.,select * from all_marks_english;.,All of the above.
Selected Answers:
select student_code, first_name, last_name from students where honours_subject = 'Eng01';,789.83,It takes multiple alternate values,Both can be used for any data type.,A subquery is a SELECT statement embedded in a clause of another SELECT statement.,When existing rows are modified,A CREATE statement is used,A foreign key value cannot be null.,retrieve from all_marks_english;.,Creating new users
No of Correct Answers:3
No of Wrong Answers:7

Total Correct Answered Questions 6
Total Marks:6/30

Restart