Q: Create a dynamic web application using NodeJs, Express and JADE that performs following action:-
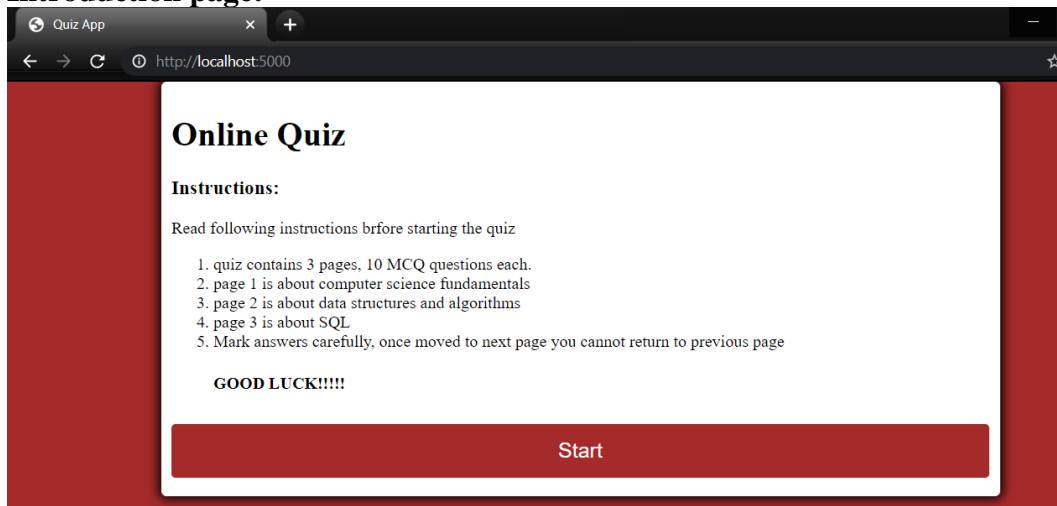
• The main page of the application display 5 or 10 questions with multiple choice answers to each question. User can select only one answer from the given answers.

• 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:
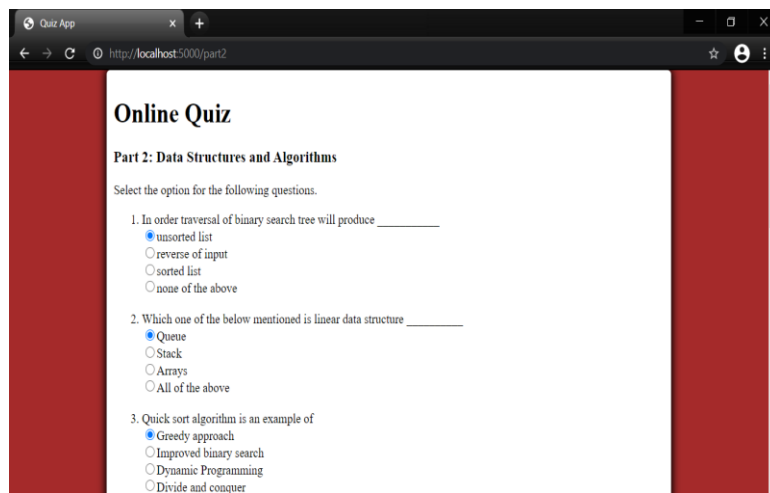
Online Quiz

Part 1: Computer Fundamentals

Select the option for the following questions.

1. Which among the following is not a type of printer?
   - ○ LCD Printer
   - ○ Laser Printer
   - ○ Inkjet Printer
   - ○ Electro Thermal Printer

2. The computer malware that disguises users by representing itself as legitimate software/program is known as …
   - ○ Virus
   - ○ Worms
   - ○ Trojans
   - ○ Spyware

3. Which among the following controls all parts of the computer and known as the brain of computer?
   - ○ RAM
   - ○ ROM
   - ○ CPU
   - ○ Processor

4. 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

5. The Second Generation Computer used …
   - ○ Transistors
   - ○ Integrated circuit
   - ○ Vacuum tube
   - ○ Chip

6. If you need to cut the contents of MS Word, which command will you give?
   - ○ Ctrl + X
   - ○ Ctrl + C
   - ○ Ctrl + V
   - ○ Ctrl + Z

7. Who among the following has designed the JavaScript programing language?
   - ○ Rasmus Lerdorf
   - ○ Guido van Rossum
   - ○ Brendan Eich
   - ○ James Gosling

8. Which among the following is the shortcut key to save word file in your computer system?
   - ○ F8
   - ○ F12
   - ○ F10
   - ○ Ctrl + Alt + 0

9. Which among the following is the shortcut key to open a new window?
   - ○ Shift + N
   - ○ Ctrl + N
   - ○ Alt + N
   - ○ Alt + F5

10. The 'P' in CPU stands for …
    - ○ Process
    - ○ Program
    - ○ Performance
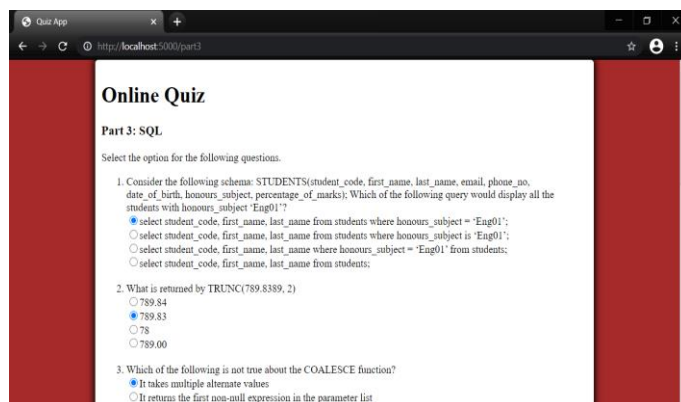   - ○ Plan

Next

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

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

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

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

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