



COMSATS University, Islamabad
Islamabad Campus
Department of Computer Science
MID TERM EXAMINATION – FA25

Subject: CSC335 Web Technologies
Instructors: Mr. Rashid Mukhtar, Ms. Saadia Maqbool
Class: BCS 5AB, BSE 5B
Name: _____

Total Marks: 25
Time Allowed: 90 minutes
Dated: 29-10-2025

Registration Number: _____

NOTE: Do as directed. don't go into extra detail. Only crisp and concise answers will earn you credit. Return question paper with answer book.

CLO-1: Classify web architectures and related applications.

CLO-2: Demonstrate the capabilities for developing professional front-end using client-side technologies.

QUESTION 1 (CLO-1)

[3x2 = 6 Marks]

Provide very short answers.

- Describe the request-response cycle in a web application. What happens when a user types a URL in the browser and presses Enter?
- Differentiate between monolithic and microservices architectures in modern web applications?
- How does the use of semantic tags in HTML5 help improve SEO and accessibility??

QUESTION 2 (CLO-2)

[4x3 = 12 Marks]

Attempt the following questions:

2.1. Write the HTML for an `<li>` element containing a link with the text "Products" and the class nav-item. Also specify CSS code to ensure this link:

- Displays horizontally (`display: inline-block;`).
- Has 10px of horizontal padding.
- Changes its text color to #007bff when hovered over.

2.2. The structure of a Pakistani CNIC number is typically in the format: `xxxxx-xxxxxxx-x` (5 digits, a hyphen, 7 digits, a hyphen, 1 digit). Provide the Regular Expression (Regex) and a complete JavaScript function OR HTML specification to demonstrate its usage.

2.3. You are using `setTimeout` to handle a task that needs to execute after a short delay. Determine the exact output order of the logs in the console.

```
function logOrder() {  
  console.log("1. Start");  
  
  setTimeout(function() {  
    console.log("3. Delayed task (200ms)");  
  }, 200);  
  
  setTimeout(() => {  
    console.log("2. Immediate task (0ms)");  
  }, 0);  
  
  console.log("4. End");  
}  
  
logOrder();
```

2.4. You have an array, `rawForecastData`, where some entries represent nighttime readings (e.g., `isDaytime: false`). You need to display the daytime forecasts only.

Write **JavaScript** code that uses the **filter** and **map** Array methods to transform `rawForecastData` into a new array named `daytimeTemperatures`. This new array should contain **only the temperature** of the forecast entries where `isDaytime` is true.

Sample `rawForecastData` :

```
[{temp: 22, isDaytime: true}, {temp: 15, isDaytime: false}, {temp: 25, isDaytime: true}]
```

QUESTION 3(CLO-2)

[7 Marks]

Write a skeleton HTML and CSS code for creating a webpage using either of CSS/media Queries, Flexbox, Grid, or any CSS framework, shown in the figure below. The layout should be responsive and designed so that all major elements are stacked when the webpage opens up on small devices. Utilize time wisely and provide skeleton code only. Repetition can be skipped e.g. if there are multiple similar fields just specify 1 only.

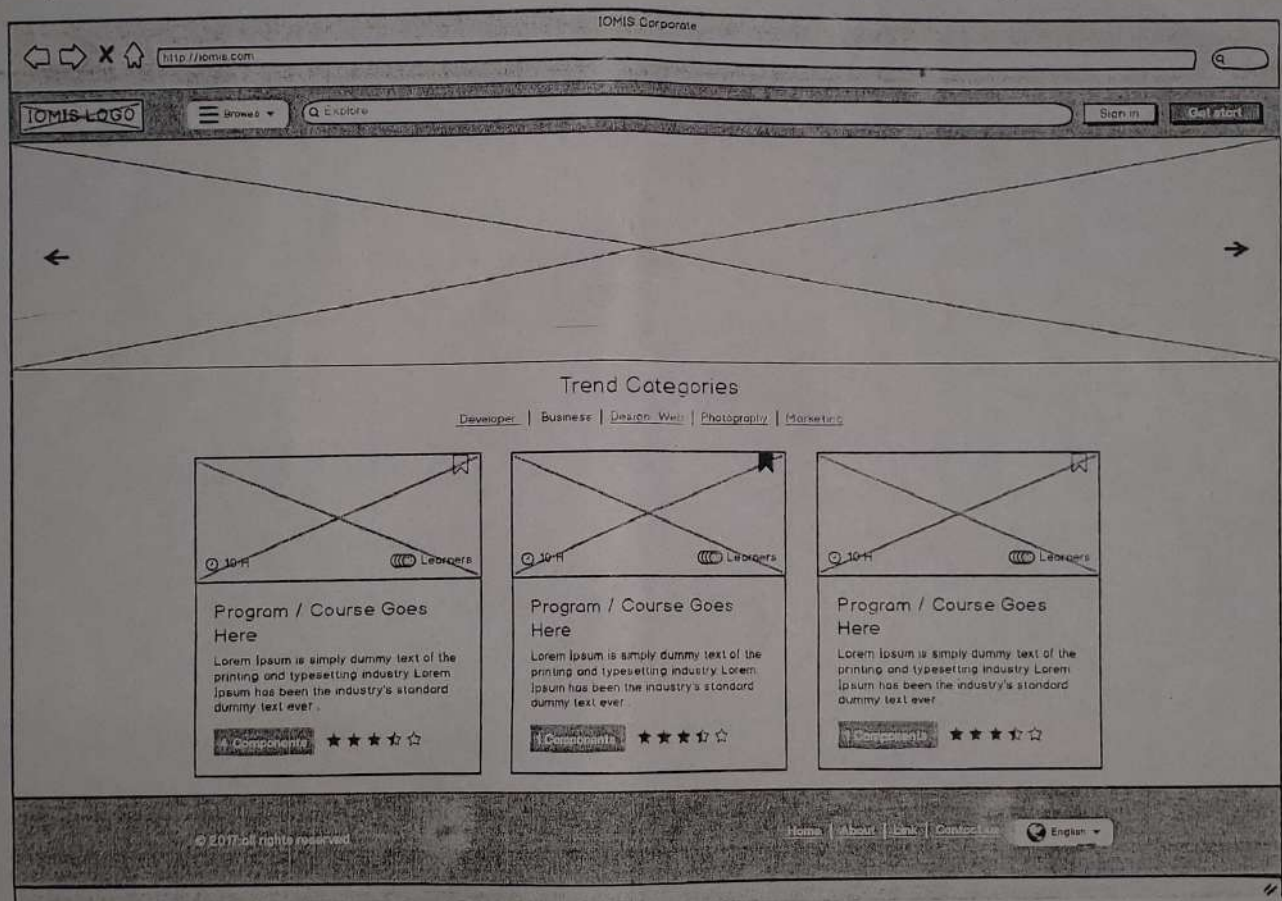


Figure 1: Wireframe mock up of the homepage