



# ELECTIVE 3: FULLSTACK WEB DEVELOPMENT

## MIDTERM EXAMINATION

2nd Semester, Academic Year 2021-2022

Please follow the directions for each section. Note that in each section you will have some amount of choice in the questions you'll be answering. The exam is based on a 100-point scale.

Partial credit will be given for answers that are done partially well.

### Programming (75 points).

#### 1. Requirements:

- i. Create a GitHub repository under the name format: MEX\_FirstName\_LastName ii.

See the below diagram for the web application layout.



iii.

It must have a login page (Hardcoded password and username is allowed).

- iv. It should display the name of the username in the second page.  
v. It should only accept username "admin".  
vi. It should only accept the password "admin1234".  
vii. It should be able to add a task with prioritization (UI is not included so you guys can design what you want here)  
viii. A mini dashboard below w/c displays number of DONE and PRIORITIES (regardless of if DONE or NOT)  
ix. A color coding is good to differentiate tasks (RED = priority, GREEN = normal, GRAY = done)  
x. It can be filter by using the color codes above. You will have to make your own implementation of this.



- xi. Register and Forgot Password should take user to an ERROR 404 page.

Essay (25 points):

1. What is the difference of state and props?

The state is an updatable structure that is used to contain data or information about the component and can change over time. The change in state can happen as a response to user action or system event. It is the heart of the react component which determines the behavior of the component and how it will render. A state must be kept as simple as possible. It represents the component's local state or information. It can only be accessed or modified inside the component or by the component directly.

Props are read-only components. It is an object which stores the value of attributes of a tag and work similar to the HTML attributes. It allows passing data from one component to other components. It is similar to function arguments and can be passed to the component the same way as arguments passed in a function. Props are immutable so we cannot modify the props from inside the component.

Props are read only; State changes can be asynchronous. Props are immutable; State is mutable. Props allow you to pass data from one component to other components as an argument; State holds information about the components. Props can be accessed by the child component; State cannot be accessed by child components. Props are used to communicate between components; States can be used for rendering dynamic changes with the component. Stateless component can have Props; Stateless components cannot have State. Props make components reusable; State cannot make components reusable. Props are external and controlled by whatever renders the component; The State is internal and controlled by the React Component itself.



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CODE	ELEC323	TITLE
PRELIMINARY EXAMINATION		
2 <sup>ND</sup> SEMESTER, ACADEMIC YEAR 2020-2021		
ELECTIVE 3: FULLSTACK DEVELOPMENT		EXAM
TERM/AY		

Topic#	Objectives	Remember	Understand	Apply	Analyze	Evaluate	Create	Total#of Items/points
1	o Familiarization with React JS	2	2	2	1	1	2	10
Total # of items/Points		2	2	2	1	1	2	10

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