Roles from the SDLC

Assignment 1

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Software Engineer

A Software engineers are tasked with **designing, building, and maintaining software systems**.

Responsibilities

1. Analyze users' needs and Design new software systems

2. Writing and test code

3. Evaluating, optimizing software

4. Maintaining and updating software systems

5. Documenting code; Presenting new systems to users and customers

6. Integrating and deploying software

7. Consult with stakeholders, third party vendors, security specialists, and other team members

Software Engineer

Front-end Engineer

- Create the **interface** of a website or web application
- Coding details: drop-down menus, fonts, colors, and page layouts
- Work with front-end technologies : HTML, CSS, and scripting language
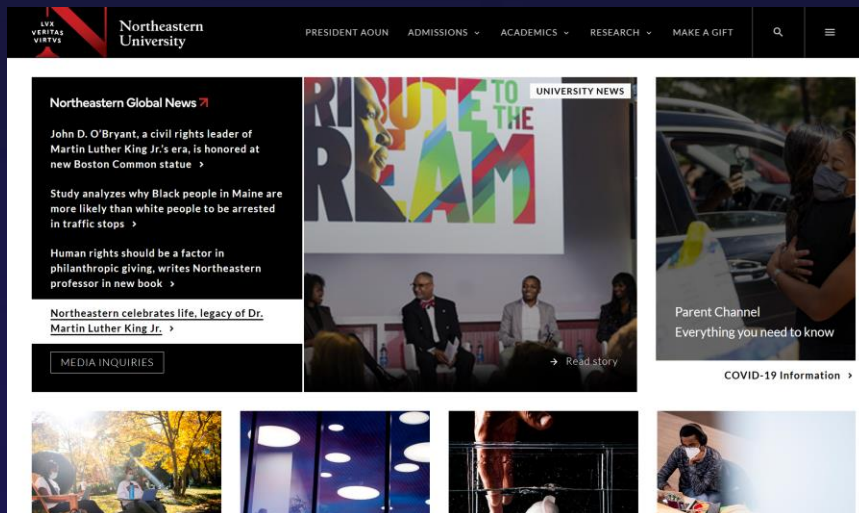
Back-end Engineer

- build and maintain the **mechanisms** that process data and perform actions on websites.

- Ensure the website performs correctly, focusing on databases, back-end logic, application programming interface (APIs), architecture, and servers.

- Using back-end programming languages like Java, Python, PHP, Ruby, C++, etc.

Full Stack
Developer

A full-stack developer helps build and maintain both the **front-end** *(the parts of a website a user sees and interacts with)* and the **back-end** *(the behind-the-scenes data storage and processing)* of a website.

Responsibilities

1. Develop and maintain web services and interfaces

2. Contribute to front-end and back-end development processes

3. Build new product features or APIs

4. Perform tests, troubleshoot software, and fix bugs

5. Collaborate with other departments on projects and sprints

Function Architect / Engineer

The system architect, designs and describes the architecture of a project as well as communicates that architecture to team members.

Responsibilities

1. Designs application systems to streamline business processes and meet the needs of a business.

2. Designing the essential characteristics of the inner structure

3. Provides technical support regarding the architecture across the different stages of the SDLC.

4. Managing the solution's development and implementation

5. collaborating with other managers within the business to establish product design, development, and sales projections

Software Project Manager

A Software project manager makes sure the **project complete smoothly and facilitates communication** about the project.

Responsibilities

1. Planning and scheduling like sets up timelines, helps to meet goal, manages roadblocks

2. Planning a project's cost and sticking to a budget

3. Allocating personnel and resources

4. Executing the software plan；Documenting the progress of the project；Assessing risks

5. Team communication and coordination to complete the project on schedule

Q&A (Quality Assurance) Engineer

QA engineers are in-charge of ensuring the quality of the product and that the software solution meets customer requirements

Responsibilities

1. Writing and executing test cases to identify bugs or deficiencies

2. Provide this feedback to the development teams.

3. Use data management systems to document test results and review the fix

4. Making sure software is up to industry standards

5. Team coordination includes meeting deadlines, creating extensive tests, monitoring progress, and writing reports.

UX (user experience)
Engineer

User experience (UX) engineers work to **optimize the interaction between humans and products.**
To make a product or service usable, enjoyable, and accessible.

Responsibilities
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1. Conduct user research to understand the user's problem, pain point and the brand goals

2. Define how the software behaves from the user's perspective

3. Determines how the software communicates its functionality to the end-user and how the end-user interacts with it

4. Conduct user testing to identify any problems with the design and develop solutions

5. Deliver the design solution to your client or company

Thanks