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Defining Computer Science and Information Technology

Complete the following assignment, and submit the Word, or pdf document using the Canvas link. **Note:** Respond to the questions in **complete sentences and paragraph form** to receive full credit. Paragraphs typically have more than 5 sentences in them.

Using complete paragraphs and sentences, answer the following questions:

1. Define what YOU think the terms *Computer Science* and *Information Technology* means? What are the differences between the two terms?

I believe computer science delves deeply into the construction of software, while Information Technology (IT) primarily emphasizes the utilization of software to address business requirements.

2. What are the definitions of Computer Science and Information Technology as defined by a cited source? Include the sources in your answers.

Computer Science is the study of programming and computing.
Information Technology is the practical application of technology.
<https://www.gmercyu.edu/academics/learn/cs-cis-it-difference>

3. List and fully describe at least 8 different fields of study that are included in Information Technology.

- **Web developer** is a person who builds applications that are primarily delivered through a browser
- A **computer programmer**, sometimes referred to as a software developer, a software engineer, a programmer or a coder, is a person who creates computer programs.
- **Database administrators** use specialized software to store and organize data. The role may include capacity planning, installation,

- configuration, database design, migration, performance monitoring, security, troubleshooting, as well as backup and data recovery.
- A **network administrator** is a person designated in an organization whose responsibility includes maintaining computer infrastructures with emphasis on local area networks up to wide area networks.
- **Project Manager**, Oversee IT project teams, developing work plans to see jobs through, on time and under budget ,from start to finish.
- **Quality assurance testers** are technicians or engineers who check software products to see if they're up to industry standards and free of any issues.
- **IT security specialists** work in various industries to build and maintain digital protective measures on intellectual property and data that belong to an organization.
- A **data scientist** analyzes and organizes data to determine trends that can influence business decisions.

4. Go to the Bureau of Labor Statistics Occupational Outlook Handbook Website (<https://www.bls.gov/ooh/>) and search for a Computer Science job or one of the IT fields you described above.

After fully researching the field, answer the following questions:

- ✓ What field did you look up?
Software Developers
- ✓ What is the job outlook, including employment change and job prospects?
Outlook is good, 25% growth between 2022 and 2023 with over 153k job openings.
- ✓ What training, and education requirements are employers looking for?
Generally looking for a bachelor's degree and sometimes requires a master's degree.
- ✓ Are there any certifications required?
Not always required but this depends on the what you are building.
- ✓ What is the nature of the work? It can be stressful and a low activity level job.
- ✓ Are there any significant points that you should consider before pursuing a career in the field? figuring out what you like to build
- ✓ What are the projected earnings?
~130k per year