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CSD Foundational Skilling Refresher - Learning Guide

Program Goal: Foundational Skilling

The objective of this program is to provide participants with a robust comprehension of fundamental concepts in vital areas such as Java and SQL. By engaging in self-paced learning and utilizing open-source resources, participants will acquire the requisite knowledge and skills to proficiently tackle a range of tasks and challenges within these foundational domains.

Upon successful completion of the foundational skilling, participants will be well-prepared to embark on the next phase: deep skilling. This advanced stage will delve deeper into these subjects, enabling participants to cultivate specialized expertise and confidently navigate complex scenarios.

This Refresher Learning Program consists of the following:

- **Week 1:** SQL
- **Week 2, 3 & 4:** Java
- **Foundational skill Assessment**

Week-wise Learning

Week 1	Week 2	Week 3	Week 4	Foundational Skill Assessment
				Duration: 3 Hrs.
Skills to Refresh: HTML5, CSS3, JavaScript	Skills to Refresh: SQL	Skills to Refresh: Java	Skills to Refresh: Java	• Java, SQL (Coding)

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The foundational skills refresher learning program adopts a comprehensive and blended learning approach to ensure an engaging and effective educational experience.

The program comprises of below essential components:

- Self-paced learning through open-source learning reference links and YouTube video courses.
- Masterclass sessions conducted by experts.
- Trainer connect for query clarifications.
- Practice with suggested resources.

Self-Paced Learning using Open-source Reference Links and YouTube	➢ Please refer to the learning reference links provided in order to learn and understand the recommended concepts. ➢ Utilize the recommended YouTube video courses provided for self-paced learning. ➢ Watch the course videos attentively, pausing and rewinding as needed to grasp the concepts. ➢ Complete the exercises and coding assignments given in the YouTube courses.
SME Connect	➢ Take advantage of the SME connect to enhance your learning experience. ➢ Engage actively in doubt clarification sessions, asking questions and seeking clarification on challenging topics. Benefit from the experts' experience and insights to gain a deeper understanding of the subject matter.
Hands-On Labs	➢ Allocate at least 2-3 hours daily for hands-on practice. ➢ Follow the provided exercises, quizzes and coding challenges which are designed to reinforce your learning. ➢ Experiment and explore additional functionalities beyond the scope of the labs to enhance your understanding.

Overview

In the first week of refreshing your learning on SQL, you'll focus on fundamental concepts and principles. By the end of the week, you'll have refreshed your knowledge of SQL database concepts, and how to use SQL to query and modify data in the database.

Learn and Practice (Open source)

Having found relevant YouTube tutorials on SQL, embark on your learning journey. Engage actively by watching the videos, pausing to grasp concepts, and making notes. Follow the instructor's code demonstrations in your chosen IDE, experimenting and running the code to reinforce understanding. After each section, practice independently, modify code, and explore variations.

Skills	Resource Links
ANSI SQL using MySQL	https://www.youtube.com/watch?v=7S_tz1z_5bA

Try it out yourself (Open source)

- Try out the following coding exercises on your own. If you find it challenging to solve the problems, you can refer to the provided solutions and expand your understanding.

    o SQL Exercises

Check Your Understanding (Open source)

- Attempt the following quizzes to assess your understanding of the subject.

    o SQL

Code Challenges (Open source)

- Engage with these coding challenges to gauge your proficiency in the subject.

    o SQL (HackerRank)

Overview

During the second, third, and fourth weeks of refreshing your knowledge on Java, you will focus on fundamental concepts and principles. By the end of these weeks, you will have strengthened your understanding of Core Java programming.

Learn and Practice (YouTube Videos)

Having found relevant YouTube tutorials on Java, embark on your learning journey. Engage actively by watching the videos, pausing to grasp concepts, and making notes. Follow the instructor's code demonstrations in your chosen IDE, experimenting and running the code to reinforce understanding. After each section, practice independently, modify code, and explore variations.

Skills	Resource Links
Core Java	https://www.youtube.com/watch?v=BGTx91t8q50
JDBC	https://www.youtube.com/watch?v=y_YxwyYRJek&list=PLsyeobzWxl7rU7Jz3zDRpqB-EODzBbHOI

Try it out yourself (Open source)

- Try out the following coding exercises on your own. If you find it challenging to solve the problems, you can refer to the provided solutions and expand your understanding.

    o Java Programming Exercises

Check Your Understanding (Open source)

- Attempt the following quizzes to assess your understanding of the subject.

    o Java

Code Challenges (Open source)

- Engage with these coding challenges to gauge your proficiency in the subject.

    o Java (HackerRank)

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