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Foundational Skilling Refresher - Learning Guide

Program Goal: Foundational Skilling

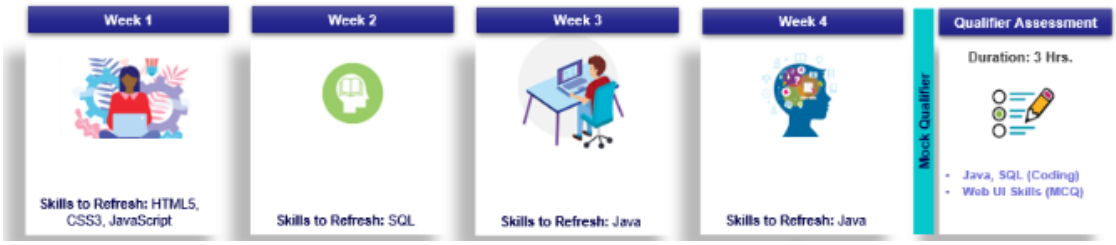
The objective of this program is to provide participants with a robust comprehension of fundamental concepts in vital areas such as Java, SQL, Web UI development. By engaging in self-paced learning and utilizing open-source resources, participants will acquire the requisite knowledge and skills to proficiently 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:** HTML5, CSS3, JavaScript
- **Week 2:** SQL
- **Week 3 & 4:** Java
- **Qualifier Assessment**

Week-wise Learning



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Learning Approach

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

The program comprises three essential components:

- Self-paced learning through YouTube video courses
- Bi-weekly Masterclass sessions conducted by experts
- Weekly trainer connect for query clarifications.
- Practice with suggested resources

 **Self-Paced Learning using YouTube**	➢ 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.

Week 1 - Web UI Development (Refresher Learning)

Overview:

In the first week of your skills refresher, you'll delve into the foundational aspects of Web UI development, including HTML5, CSS3, and JavaScript. By the conclusion of this week, you'll have established a strong grasp of these essential technologies, setting the stage for more advanced exploration in the subsequent phases of your learning journey.

Learn and Practice (YouTube Videos)

During this phase, your learning journey continues as you seek out pertinent YouTube tutorials that comprehensively cover Web UI skills: HTML5, CSS3 and JavaScript. Engage actively with the video content, strategically pausing to digest concepts and take comprehensive notes. In your chosen IDE, replicate the instructor's code demonstrations to reinforce understanding. Strengthen your comprehension by executing the provided code, experimenting with variations, and closely observing outcomes. After each tutorial section, embark on independent practice sessions where you craft, modify, and explore diverse code alternatives. This immersive approach not only solidifies proficiency but also paves the way for a deeper mastery of these pivotal technologies as you progress through your learning journey.

Skills	Resource Links
HTML5, CSS3	https://www.youtube.com/watch?v=mU6anWqZJcc
JavaScript	https://www.youtube.com/watch?v=8dWL3wF_OMw

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.
    - HTML, CSS Exercises
    - JavaScript Exercises

Check Your Understanding (Open-source)

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

Code Challenges (Open-Source)

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

- HTML, CSS
- JavaScript

Week 2 - SQL

Overview

In the second 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.
  - SQL Exercises

Check Your Understanding (Open-source)

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

Code Challenges (Open-source)

- Engage with these coding challenges to gauge your proficiency in the subject.
  - Java (HackerRank)
  - SQL (HackerRank)

Overview:

In the third and fourth weeks of refreshing your knowledge on Java, you will concentrate on fundamental concepts and principles. By the end of these weeks, you will have reinforced 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.
    - Java Programming Exercises

Check Your Understanding (Open-source)

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

Code Challenges (Open-source)

- Engage with these coding challenges to gauge your proficiency in the subject
    - Java (HackerRank)

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