**Challenge Planning Document**

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| **Wave** |  |  | **Trainer Name** | **Hossam Adel** |
| **Week Number** |  |  | **Challenge Name** | **Software Design** |
| **Duration** |  |  | **Type** | **Classroom** |

**Challenge description:**

How to Design the software using serval methods depends on the project needs and hardware limitation.

**Challenge prerequisites (if any):**

* Timer Driver Implementation.
* UART Driver Implementation.
* Know how to write layering code.

**Main Objective(s):**

Learn how to think Dynamic using C in Embedded world.

**Challenge outcomes:**

At the end of the challenge, the students will be able to:

1. **How to Design a real Sequence Diagram.**
2. **How to Design the code dynamically.**
3. **How to Design the with/out OS.**
4. **How to calculate the CPU Load with/out OS.**

**Gamification Strategy:**

Hint: Explain how are you going to gamify the learning experience.

Students will take a project each session in order (TMU, Basic Comm Stack, Simple OS scheduler and Design Application using OS ), every project will have a points and the students supposed to fil the missing software requirements !

**Assessment tips:**

Scores will be calculated by the challenge owner after every exercise.

One Sprinter will be responsible for the scores calculation and publishing

**Challenge Owner Checklist:**

Did you include a customer Call ? No

Did you include a customer F2F Demo ? No

How many emails are you planning from the teams to send to you ? 4

What are the number of team members per team ? 2

Have you included requirements traceability ? Yes

Have you mandated on the team members to use GIT ? No

Have you reviewed your gamification strategy with our gamification expert (Samy Amin) ? Yes

Do you need any additional or specific tools ? No

Do you need to secure any specific prize(s) for the winning team(s) ? No