Phase 4: System Modelling and Design

**Developer groups** are required to undertake system class and object Analysis.  You are required to:

**Task 4.1: System Class modelling and Analysis**

1.     Identify system analysis CLASSES and describe each class.

2.     Draw an ANALYSIS CLASS model/Diagram.

**Deadline** (for 1 & 2): Sec1: Thursday 10 May 2018: DRAFT Done (By Sanaa)  
**Deadline** (for 1 & 2): Sec1: Tuesday 15 May 2018: FINAL version

3.     Draw DETAILED CLASS model/Diagram.

4.     Draw an OBJECT diagram

**Deadline** (for 3 & 4): Sec1: Tuesday 15 May 2018: DRAFT Done (By Sanaa &Nour)

**Deadline** (for 3 & 4): Sec1: Thursday 17 May 2018: FINAL Done (By Sanaa)

**Task 4.2: System Sequence & State modelling and Analysis**

5.     Draw **Four** or **Five** SEQUENCE diagrams: **Each member** of the group shall write **one** sequence diagram, one for each use-case, the same use-case that the member of the group has written a detailed use-case for. Done (By Sanaa& Maryam & Eman & Sour & Ahmad)

6.     Draw **One** STATE diagram: **One** state diagram for **an object** (from your object diagram) that has a state. If no object in your system has a state, then describe why. Done (By Ahmad)

**Deadline** (for 5 & 6): Sec1: Tuesday 15 May 2018: DRAFT

**Deadline**: Sec2 (for 5 & 6): Sec1: Thursday 17 May 2018: FINAL version

**Task 4.3: System and architectural Design (Design Goals)**

7.     Consider at least three design goals, **TWO** general design goals, e.g. low coupling, high cohesion, and at least **ONE** specific system design goal, derived from your business non-functional requirements (, e.g. performance in terms of processing speed; reliability in terms of number of faults it can make in a day; user-friendliness in terms of training days;) or non-functional constraints, e.g. has to run on MS windows, or has to work in the north pole. Describe these three design goals clearly. Done (By Eman)

8.      Draw, your chosen architectural designof your system according to the above THREE design goals using **Architecture diagram,** (or**Component diagram)** Done (By Nour)

9.      Draw, your chosen System design of your system according to the above THREE design goals using, **Component diagram**. Done (By Maryam)

10.    Draw a **deployment diagram** of your system, by mapping your software components on potential hardware nodes, taking into account the THREE design goals above. Done (By Sanaa)

**Deadline** (for 7, 8, 9 & 10): Sec1: Thursday 17 May 2018: DRAFT

**Deadline** (for 7, 8, 9 & 10): Sec1: Tuesday 22 May 2018: FINAL version

=> **PHASE 4** **SUBMISSION DEADLINE**: **Tuesday 22 May 2018**. Submit a System Model document that includes the above EIGHT (types of, i.e. 2, 3, 4, 5, 6, 8, 9, 10) diagrams + (items for: 1 , 7) on **Tuesday 22 Jan**.

**=> Final Presentation** of all your project work will be on:

   - Sec1: Wednesday **23 May 2018** during the lecture.

=> **FINAL COMPLETE PROJECT** **SUBMISSION**, of **ALL** Phases, will be on **Saturday 2 June 2018**. I will send a separate email on its details.