

**Texas Tech University**  
**Computer Science Department - CS 3365 – Software Engineering**  
**Due: March 7, 2019 (Midnight)**

**Submission through the Blackboard System ONLY**

**No Other Forms of Submission Will be Accepted – No Extensions**

**Goal:** Modeling using 1) State chart of the system, 2) Use case diagram and specifications, and 3) software and hardware architecture of the system

Description: Through this assignment, students will practice high level modeling of a smart coffee maker. The specification is given in the link given below. It is also uploaded to the Blackboard system.

**Smart Coffeemaker - Mr. Coffee**

<https://www.mrcoffee.com/on/demandware.static/-/Sites-mr-coffee-Library/default/dwddfe18f0/documents/instruction-manuals/PSTX91WEGuide.pdf>

**Problem:**

Please read the user specification of the smart coffee maker and build:

- 1) Software and hardware architecture of the specified coffee maker (an architecture diagram)
- 2) High level state chart diagram of the system (a state diagram)
- 3) Use case diagram (a use case diagram)
- 4) Use case specifications (the use case specification of three chosen use cases from the use case diagram).  
The use cases can be chosen arbitrarily by each student.

**Deliverables** (6 pages in one pdf file):

1. Architecture diagram (one page)
2. State diagram (one page) (a diagram with 6 – 7 states should be enough)
3. Use case diagram (one page) (a diagram with 6 – 7 use cases should be enough)
4. Use case specification for three chosen use cases (3 pages)

**Some Notes.**

- For diagrams you would need to use any tool capable of drawing software and UML diagrams. The syntax of the chosen tool must be adhering to the general standard of software and UML diagrams. Examples of tools StarUML, www.UMLet.com, <https://online.visual-paradigm.com>, etc.)
- Hand-written diagrams end up with 50% deduction in total mark.
- 25% deduction of total mark per day for late submission.