

Department of Computer Science and Engineering

Quiz 2, Fall 2023

CSE471: System Analysis and Design

Total Marks: 10

Time Allowed: 30 minutes

Name:

ID:

Question

“StarAuto” is a home automation system to manage, operate and maintain household devices. Upon receiving the command “Prepare workspace”, the Prepare HomeStar module is initiated. First, the Generate parameters module is given a day/night status and it returns the parameter details for the status as well as an optimization control flag for system optimization to be carried out later. Prepare HomeStar sends the parameter details to the Prepare batch module and receives a list of activated devices in return. In order to prepare all connected target devices, the Prepare batch module fetches a list of target devices from the Get devices module by providing the parameters. For each device, Prepare batch module first calls upon Get current status library module by providing the device id and in return receives whether the device is currently activated or not. If the device is not active, the Activate device module is triggered using device id and parameter mapping. Otherwise the Update device state module is triggered with similar information and the target device is updated with given parameters. After each device is activated/updated, the Generate activation entry module creates formatted specification and returns an entry to Prepare batch. After all target devices are activated/updated, the Prepare batch module sends the activated device list to Prepare HomeStar. Finally Prepare HomeStar initiates the Optimize system module which is an off-page connector and Initiate emergency alert module which is an on-page connector.

Now **design** a structure chart diagram based on the given information. You might find it useful drawing it in landscape. [CO2]

Solution:

