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| Course Number | **ESE 4009** |
| Section Number | **1** |
| Course Title | **Embedded System Design Project** |
| Semester/Year | **Fourth / 2020** |

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| Instructor | **Mike Aleshams** |

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| **Assignment** | **1** |

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| Submission Date | **21st May 2020** |
| Due Date |  |

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Q. **Research on recognize and synthesize an embedded software engineering design problem.**

We can see that all gadgets around us contain components of embedded software also such strategic applications as different mechanical mechanization hardware, electronic control units and rocket direction frameworks. Indeed, it alludes to IoT gadgets as well, presently so quick picking up in popularity. Embedded systems can be seen in every sector of our day to day living, to name but a few: Automotive, Aerospace, Security, Electronics, Banking and Home appliances, Offices, schools, universities, Telecom industries etc. What makes embedded software so extraordinary when contrasted with basic application software? All things considered, the most basic highlights of an embedded system are their more noteworthy reliability, accuracy, and performance speed enabling real-time computing. Moreover, they have a little size and lower power utilization, which opens for them a more extensive assortment of uses.

There can be many problem that we can see when we run an embedded system. Such that are mentioned below:

1. **Security**

Security turned into a consuming issue in the advanced world. The related dangers develop exponentially, particularly so for IoT gadgets picking up fame worldwide and getting progressively interconnected to one another. Since our day home appliances like electric cookers, fridges, and clothes washers have availability connectivity features integrated by default, the Internet of Things now is exposed to a serious risk of hacking.

1. **Stability**

Stability is of fundamental significance. Unforeseen conduct from an embedded system is unacceptable and presents genuine dangers. The clients request that inserted systems must have uniform conduct under all conditions and have to work without having a problem with the stability issues

1. **Design Limitation**

The basics of limiting the sizing of the system has always been the very critical follow-up for the designers. Most of the clients want a system which is in smaller size but with much equipped formations. The other can be the long term working of the system. That is how much can a system work without needing a maintenance drive.

1. **Connectivity**

There are so many different ways to connect device a device to the internet. Wireless connection can be made through the Wi-Fi, Ethernet, Bluetooth, and other channels. Most of the time when the connectivity is not established we can find difficulty in emphasizing the working of the system.

<https://www.infopulse.com/blog/challenges-and-issues-of-embedded-software-development/>