

**Embedded System Architecture 2**

# Assignment1

(7.5 % of Final grade)

**Winter 2020**

# CLASS: ESE 3005

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***Topic***

**Describe the advantages and disadvantages of the embedded system in general. Also, how would embedded system impact the life style.**

**Solution-**

Embedded system is a combination of different software and hardware and have its specific function in accordance with mechanical and electrical support. We consider it as a computer system. We use a lot of embedded systems in our daily life like digital cameras, house appliances and many more. Some embedded systems have only one particular function but on the other hand some have one or two functions.

**Advantages of Embedded System:**

1. **It is used for mass production**

In this modern era, to reduce the human efforts embedded system is used. For example, Some MNCs run machines those are based on embedded system which increases the productivity and decreases the human efforts.

1. **Small in Size**

In present time, due to vast technology size of embedded system is reduced, which results in easy installation of product and easy to carry from one place to another.

1. **Specific to One task**

Most of the embedded systems are designed for one specific task which improves the quality and easy to manage the particular task.

1. **Use less resource**

As they are designed for particular task, they use less power as compared to conventional machines due to size and and operation.

1. **Highly stable and reliable**

Most important advantage is that they are more stable and reliable due to above mentioned advantages like smaller size, designed for specific task, fast operation.

**Disadvantages of embedded System:**

**1.Hard to maintain back end**

Embedded system is easy to use because it hides the backend operation from the user. But when there is any problem with in the system it is hard to handle the backend process.

**2. No Upgradation**

Once the embedded system is designed there is no chance to make any change or upgrade the system, as we know it is designed for specific task and operation and the hardware is limited.

**3.Troubleshooting is problematic**

Another problem is with transferring the data from one system to another. It is hard to send data between two systems.

**How embedded system impact the life style.**

It makes the human life very easy as we use different embedded systems in our daily life. In our homes we use different home security and alarm systems to protect our family. Apart from the home, we use embedded systems on roads for example in traffic lights and in over speed vehicle detection. Both helps to control the traffic and it results in proper directions to the moving vehicle, also reduce the fatal accidents. Moving towards the car, a special type of sensor is used in the car to control the airbags. Information reading the cars movement is stored in microcontroller and instantaneously deploys the airbags in the condition of accident to save the passengers. On work it makes the human life very easy because we use it in different places like elevators, calculators for complex calculations, in printers to read the content of files and further printing them and many more. At last we need embedded system in our fun and hobbies, digital camera is good example as it is required to capture pictures, to store data and to represent that data. These systems are everywhere around us and make the human life easier.