Answer 1:

There are many application types such as Batch processing system where the software has a lot of data to be processed, entertainment system such as games, Standalone applications, and Embedded control systems. These different software types require different and specialized software engineering techniques to support their design and development as the purpose of the software is different for e.g., Real time systems must be built perfect such as satellites because updates to these systems are very difficult, so they must be built in such a way that everything is considered before the software is developed. Entertainment software's such as games are designed in way it has good graphics/UI and can be updated at a later stage as well so the priority for real time systems is perfection and safety while for entertainment software's is graphics and UI. Next reason why different applications are built differently is software lifecycle and timeline of delivery some software's such as web applications must be built very quickly and deployed (and updated afterwards) while other large control systems software is used long time and can take time to be developed. Also, another reason is the cost associated with software there are some software such as embedded systems are difficult to change at a later stage in software development while most of web applications or mobile software can change quite frequently without causing any issues. For above reasons different application types require specialized software engineering techniques.

Answer 2:

I think there are 2 sides to it. In one way to think it I think it is good to have certifications of professional engineers same as doctors and lawyers as having certification increases persons skill level as the developer learns new skills while doing certification. Also, certificate acts as proof of competence/expertise in particular field such as ML/AI or technology. If the person has some good certifications which is recognized worldwide so the person is considered as an expert in national and international level. People with certifications can have a upper hand in job market and attract employers. On the downside many certifications are very expensive and hence it is not possible for everyone to complete it. Also, certification does not guarantee that that the person is expert in that field also the certifying authority may not be always recognized and may have some outdated things which are not been updated in recent years as in software industry the pace at which the development is going on the certifying authority may need to change every year.

Answer 3:

The business software systems are usually very large, complex and the software may change tending to change in the requirements from the stakeholder. There is a chance that the business software may change as we go ahead in development if the requirements change hence incremental approach is better for it but for real time systems there are many hardware components are involved which interact with software which cannot be changed continuously hence everything has to be thought while developing the software rather than changing in between becomes very difficult hence incremental approach is not used in real time systems.