**Software Development**

1. **In your own words, describe the role of Software Design and computer programming in the Software Development Lifecycle (SDLC) (no more than 150 words). Make sure to address *why* the software design process is so important.**

Software design works as a model or a layout for developing a software solution that will meet the specified user requirements. Once the design is agreed upon, it is saved to be revisited when developing the software. If the software design is for a big project, the project can be split into modules to make it easy to work on each requirement of the project also, should the changes to the project be required in future, it would be easy to change the module and not the whole project. Software design is important because it sets a foundation to building the software code.

Computer programming is the process of building an executable code based on the agreed upon design using a chosen computer programming language.

1. **At what point in the lifecycle does the Software Design process take place?**

Software design begins with the development of the requirements.

1. **Describe why, in your own words, catching an error in the design stage is cheaper in both time and money than catching it later in the product’s lifecycle. Use an example to illustrate your explanation.**

Finding errors later in the product’s lifecycle will cost more time and resources to fix. If those errors are not found in requirement phase they will be included in the design phase of the solution and will be developed as part of the software and to fix them when the software has been developed will be costly.

Miscalculation of employee salaries by multiplying overtime by hourly rate instead of half the daily rate and multiplying daily hours worked by half the daily rate.