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Assignment 2 – Defining process models

1. Waterfall Model: The Waterfall Model is a traditional sequential software development process that follows a linear and sequential approach. It consists of distinct phases that flow downwards like a waterfall, where each phase depends on the completion of the previous one.

Description:

* Planning: Our goal is to create a clone of the API lepordweb, we will use our class time to communicate and program the application in python
* Requirements: The requirements for this project is a database of users, courses that contain CRNs, course names, times, and instructors. Also requires a working interface or GUI.
* Design: The UI will allow any level of personal to login and make required changes such as signing up for classes as a student and adding courses as an administrator. The Goal is to have a base class and inherit the student, instructor and administrative class from the base class eliminating over structuredness. This is good for the design part.
* Implementation: We will start coding and implementing the software based on the design specifications. In python You have to implement the UI with the data base to make it fully come together.
* Verification: The completed software is thoroughly tested to ensure it meets the requirements and quality standards. We will do this by adding classes then searching for them as a student, trying to sign up for 2 classes at one time, more then 20 credits, ext.
* Maintenance: Once the software is deployed, ongoing maintenance and bug fixes are performed as needed.

1. Incremental Development Model: The Incremental Development Model breaks down the development process into smaller increments or iterations. Each iteration encompasses the entire software development life cycle, including planning, requirements, design, implementation, and testing. However, each iteration delivers a working subset of the final product.

Description:

* Requirements: Initial requirements; We plan to create a simple API that will allow students to sign up for classes and admins to change them, we will make a database that holds a few students and classes and attempt to get them to smoothly interact
* Design: We will design the project to make sure that the individual classes smoothly worth with one another and interact without flaws. We also need to develop how we will store out information and how it will tie together. This is where you will design a user interface.
* Implementation: We will implement the functionality specified in the iteration.

We also need to implement the database with our user interface and C++ code.

* Testing: The implemented functionality is tested to ensure it meets the requirements and works as intended.
* Iteration: We will analyze what we are missing and how limit the information feedback is to the user. With testing we can determine what can be made easier and then go back into the project and implement these ideas to make the API better.
* The process continues until the final product is complete. The process repeats.

1. Integrate and Configure Model: The Integrate and Configure Model focuses on integrating and configuring existing off-the-shelf components or software to create a customized solution. It involves selecting appropriate components and configuring them to fit the specific requirements of the project.

Description:

* Planning: Our goal is to create a clone of the API lepordweb, we will use our class time to communicate and program the application in python
* Component Selection: The appropriate off-the-shelf components will pick based on what are needs are these will include menu UI such as a login page and display section.

And reach as far as class structures that fluently interact.

* Configuration: We then need to change these components to fit our needs, such that if we pull a teacher component with a bunch of extra stuff we don’t need like address and marital status we will get rid of those.
* Integration: Once all the components are complete we will double check then and once verified combine them together to work in sync. Also integrate all the code together.
* Testing: The completed software is thoroughly tested to ensure it meets the requirements and quality standards. We will do this by adding classes then searching for them as a student, trying to sign up for 2 classes at one time, more then 20 credits, ext

Testing for things like bugs and other errors we made.