**Applied Programming Concepts**

**Assignment #3 – Process Models and Version Control**

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1. **Waterfall:**

**Spec:**

* Database of users (should be able to hold 100 students, 10 instructors, 1 admin)
* Database of courses (CRN, course name, times, instructor)
* Three types of users:
  + student – can register, can see available courses and their own schedule.
  + instructor – can see available courses and their own course roster.
  + admin – can see everything, can edit courses/users/schedules.
* Should include multiple semesters, print-out of schedule, scheduling preferences.
* Have a GUI on three different levels: Admin, Student, and Instructor.

**Design:**

* Programming Language: Python, SQL
* Classes attributes:
  + Student – First name, last name, student ID, graduation year, major/department, email.
  + Instructor – First name, last name, employee ID, title, department, email, year hired.
  + Administrator – First name, last name, employee ID, title, email, office number
  + Course – Title, CRN, department, instructor, time, day(s) of the week, semester, year, credits
* Create classes for student, professor, and admin:
  + Inherent first name, last name, ID attributes.
  + Each class has different level of permission and different methods.
* Databases:
  + Users: admin table, student table, instructor table
  + Courses:
  + Rosters
* GUI:
  + Admin:
  + Student:
  + Instructor:

**Implementation:**

**Testing:**

1. **Incremental Development:**
2. **Integrate and Configure:**