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CS 162

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Lab 4

Design:

1. University class – contains information on university
   1. Member varaibles
      1. Name = “Oregon State University”
      2. Buildings: contains n building objects
      3. People: contains m Person objects
   2. Functions
      1. getBuildingInfo
         1. gets name address and building size in sq ft
      2. getPeopleInfo
         1. prints name, age, gpa or rating
2. Building Class – contains information on buildings
   1. Member variables
      1. Name
      2. Size in sq ft
      3. Address stored as string
3. Person Class – parent class for student and instructor, represents people on campus
   1. Member variables
      1. Name
      2. Age
   2. Functions
      1. do\_work()
         1. generates random number for how many hrs they work for
         2. outputs message depending on if person is Student or Instructor
4. Student class- derived from Person, represents students on campus
   1. Variables
      1. GPA – double between 0.0 and 4.0
   2. Function
      1. Do\_work()
         1. “PERSON\_NAME did X hours of homework”
            1. X is random generated
            2. Names and hours derived from input file
5. Instructor Class, derived from Persons class, represents instructors on campus
   1. Member variables
      1. Rating
   2. Function
      1. Do\_work()
         1. “PERSON\_NAME graded papers for X hours”
6. Menu included in main function
   1. Print information for all buildings
   2. Print information of everybody at university
   3. Choose person to do work
      1. Print new menu that prints all names and let user input the choice of person they would like to do work
   4. Add\_student()
   5. Add\_instructor()
   6. Add\_building()
      1. All add functions are written to file, create headers to search for specific types?
   7. Exit
7. Text file
   1. Contains logs of all the informations, initial information of 1 student, 1 instructor, and 2 building are written at start of runtime
8. Information class
   1. Makes one instructor and adds to txt file
   2. Makes one student and adds to txt file
   3. Makes 2 buildings and adds to txt file