**Lab 4 design**

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| **Class** | **University** |
| **Member** | **Description** |
| string name | name of university |
| int numBuildings | number of buildings |
| int numPeople | number of people |
| vector<People\*\*> |  |
| vector<Building\*> |  |
|  |  |
| **Methods** |  |
| void printBuildInfo() | prints info on all buildings |
| void printFacuiltyInfo() | prints info on all people |
| void choosePerson() | choose person to do work |
| start() | holds the menu and starts the program |

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| **Class** | **People** |
| **Members** | **Description** |
| string name | name of person |
| int age | age of person |
| **Methods** |  |
| do\_work(x) | create a random number of work based on max of x |
| getName() |  |
| getAge() |  |
| setAge() |  |
| printPersonInfo() |  |

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| **Class** | **Student : public People** |
| **Members** | **Description** |
| double studentGPA | gpa for student |
|  |  |
| **Methods** |  |
| getGPA() | returns student’s gpa |
| do\_work(x) | “PERSON\_NAME did X hours of homework.” |
| printPersonInfo() |  |
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| **Class** | **Instructor : public People** |
| **Members** | **Description** |
| double rating | rating for instructor |
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| **Methods** |  |
| getRating() | returns rating of instructor |
| setRating() | sets a random rating for instructor |
| do\_work(x) | “Instructor PERSON\_NAME graded papers for X hours |
| printPersonInfo() |  |

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| **Class** | **Building** |
| **Members** | **Description** |
| string name |  |
| double size |  |
| string address |  |
| **Methods** |  |
| printBuildInfo() |  |