Build system by using component pre-programmed by oneself or others. Integrate everything into 1 project, run, test, debug, re-edit and repeat.

Pre-programmed systems that can be used to create the system

1. Sawyers
   * Contains open sources files for functions necessary to the system
   * Allows the software to be integrated and personalized as desired
2. Regpack
   * Allows to be embedded into personal website
   * Contains registration templates and contains the ability to have all functions necessary to the system
   * Allows for group registration – admin can register multiple people to courses if needed

**Integration: Using Sawyers**

Use Sawyer because it provides open source libraries that can be directly integrated in personal program rather then using Sawyer as a base, simply use the material available through them to use.

1. Create the base class user, and derived classes student, instructor, and admin. Include all attributes necessary for each class and system. – **1 week**
2. Look through Sawyer’s open sources library to find pre-programmed functions necessary for the system (search courses, add/drop courses, print schedule etc. – **1 week**
3. Integrate functions from Sawyer into the system – **2-3 weeks** 
   1. Any open-source libraries that relate to the functions necessary for system. Code can be altered to fit criteria of system and attributes.
4. Code any remaining functions that were not available through Sawyer and add them to the system – **1-2 weeks**
5. Integrate all files together into 1 program: test, debug, fix, repeat – **1-2 weeks**
6. More tests and fixes, once system is ready to go, launch. – **1 week**

**Works Cited**

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