NORTH SEATTLE COLLEGE
Application Development BAS

Student Information

Student Name	Kellan Nealy	Email Address	chikn42@gmail.com

- *I agree to work as shown below and to uphold the commitment of 275 hours of service.*
- *I agree to submit a paper to the Faculty Advisor at the end of the project. Details on the paper will be provided by the Faculty Advisor during the project cycle.*
- *I will work toward the established Learning Objectives as outlined in this contract and I will keep the Faculty Advisor informed of any changes in my work or school status.*
- *I hereby release the Seattle District of Community Colleges, its officers, employees, and agents from and against any and all claims or damages arising out of or in connection with my capstone project and participation therein.*

Student Signature	*Kellan Nealy*	Date	4/24/2017

Faculty Information

Advisor Name		Course	
Phone		Email	

- *I give the above student permission to participate in the Capstone program for Application Development and ask as their Faculty Advisor.*
- *I will work with the Student to define Learning Objectives.*

Faculty Advisor Signature		Date	

Learning Objectives

Learning objectives refer to a set of statements that clearly describe a result to be accomplished during the student's capstone project experience and should be tied directly to the program learning outcomes. The learning objectives that you outline should be *specific*, *reasonable*, *achievable*, and *measurable* goals. Types of appropriate learning objectives can be developed in the following areas:

- **Career-Oriented Objectives:** These relate to your *career goals*.
    - o **Example:** "I would like to learn about how large-scale software companies set up stage and production deployment pipelines in order to gain practical release engineering experience."

- **Skills Acquisition Objectives:** These relate to developing *new* on-the-job skills or learning new tasks or ideas.
    - o **Example:** "I have never used JavaScript frameworks for server development before. My goal is to create a REST API on a hosted server using the Node.js JavaScript framework."

- **Skills Application/Development Objectives:** These relate to improving or developing your *current* skills.
    - o **Example:** "I have current experience with PHP front-end web forms. My goal is to learn an MVC framework which can be used to create single-page web applications that enable dynamic user interactions with minimal network traffic."

- **Human Relations Objectives:** These relate to improving communication and interpersonal skills which can create a more positive environment.
    - o **Example:** "I will improve my ability to work on a team in a large software development organization, including interfacing with other groups in order to complete projects which require large-scale coordination."

Program Learning Outcomes

The core education requirements of the BAS degree in Application Development are designed to fulfill a set of desired learning outcomes for the education of undergraduates in the United States. These program learning outcomes include:

1. Identify and analyze user requirements using industry-recognized tools and strategies to interview stakeholders, and to prioritize and document requirements.
2. Compare and assess different approaches to software development lifecycle and apply effective strategies to manage the process of developing, designing, testing, and delivering a software application.
3. Develop and document application functional design meeting the project objectives and constraints, including supporting justification and cost-benefit analysis.
4. Develop software components meeting the design specifications, and plan and execute integration of various component systems and acceptance testing, employing appropriate quality assurance standards and procedures.
5. Collaborate effectively with a wide range of professionals, in person and virtually, using tools and strategies that support cooperative software development practices.
6. Present and effectively communicate complex technical concepts and constraints to a wide range of technical and non-technical stakeholders.
7. Research trends in software development and acquire and integrate new skills and knowledge to keep abreast of changes within the software development profession.
8. Manage software development project activities and deliverables in a timely and efficient manner.
9. By the end of the program graduates will have developed a portfolio of industry-based software development projects, documenting process, role in the development team, and outcomes.

Example Objective Statement

- **Objective:** "I would like to learn how to deploy web applications in an Amazon Web Services environment."
- **Actions:** "(1) I will get authorized access to AWS tools and the current web application deployment scripts; (2) I will create new Cloud Formation templates to deploy the web application as part of the automated test and deployment steps."
- **Result:** "I will know I completed this objective when I can walk another engineer through all steps of the process and when code update to the main branch of the repository result in updated stage and production deploys."
- **Importance:** "This objective is important to me because I need to be able to not only build, but deploy the web applications built, getting them live and reliably set in front of the customer."
- **Program Learning Outcomes:** "Upon meeting my goal I will have achieved program learning outcomes #1, #5, #6, and #9.

Work with your Faculty Advisor to complete a minimum of 4 learning objectives. These objectives should be relevant to your capstone project and help you develop your professional skills.

Objective #1

What is your objective/goal? What would you specifically like to know or be able to do by the end of your project work?

> I want to build a website that provides data analysis through social media easily. The first objective will be to get the site hosted and up for development on AWS. Features will be minimal but setting up my cloud environment will make it easy to implement going forward.

What will you do to accomplish this goal? *(Provide 2 specific actions)*

> [1.] Build a comprehensive site and host on AWS.
>
> [2.] Decide on a stack for my project and connect server to domain.

How will you know you've accomplished your goal?

> If I can complete the user stories I've designed for the project, I will know the project is complete. I hope to also provide continuous integration testing to my web service to help prevent breakage in functionality as I add more features.

Describe why this objective is important to you?

> I want to get more experience working directly with server infrastructure and computing tasks at the server level. I also want to provide a cool product to the internet and it will need a strong cloud foundation.

What program learning outcome(s) does the proposed objective meet? *(Refer to the Program Learning Outcomes" section on page 3)*

> 3 - Develop and document application functional design meeting certain constraints.

Objective #2

What is your objective/goal? What would you specifically like to know or be able to do by the end of your project work?

> Take advantage of several public APIs to search and aggregate results. For example, to find out how popular a company is through twitter mentions and google searches, before deciding how to invest money.

What will you do to accomplish this goal? *(Provide 2 specific actions)*

> **1.** Explore various APIs starting with Twitter and Google for the project.

> **2.** Build these into the system before adding more (instagram, facebook, linkedIn, etc)

How will you know you've accomplished your goal?

> Passing acceptance with certain user stories I will design, like being able to compare number of Seattle twitter mentions to Los Angeles twitter mentions. Or being able to see how many times a company name was included in a google search.

Describe why this objective is important to you?

> Data mining is something lots of people do individually, but there is no place to easily mine data from many public sources at once. I would like to offer this functionality to myself and others.

What program learning outcome(s) does the proposed objective meet? *(Refer to the Program Learning Outcomes" section on page 3)*

> 4 - Develop software components meeting the design requirements, and execute various integrations into the overall system with acceptance, etc.

Objective #3

What is your objective/goal? What would you specifically like to know or be able to do by the end of your project work?

Build a functional and simple-yet-effective user interface for the product, while making sure the product looks good and takes advantage of important styling techniques.

What will you do to accomplish this goal? *(Provide 2 specific actions)*

1. Decide on fonts and color pallete for the site and ensure no deviations.

2. Test edge cases with the UI and use media queries to optimize for different screen sizes.

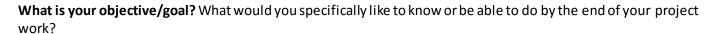**How will you know you've accomplished your goal?**

I will know I've accomplished this goal when I've passed acceptance with certain user stories. For example, with a 680x1072 screen I can clearly see all the elements of the UI and navigate appropriately achieving all functionality of the product.

Describe why this objective is important to you?

Being able to have a UI that focuses on eliminating cross-platform visual issues, is extremely important when you have a site that will be accessed from various platforms and environments. Having a good-looking UI will help make the application more popular as well.

What program learning outcome(s) does the proposed objective meet? *(Refer to the Program Learning Outcomes" section on page 3)*

6 - Present and effectively communicate complex technical information to technical and non-technical users.
4 - Develop software components meeting the design specifications (following my own style guide will be important).

Objective #4

What is your objective/goal? What would you specifically like to know or be able to do by the end of your project work?

Talk to various potential stakeholders about what they would like to see in a product like this. Maybe even get integration ideas from some of them.

What will you do to accomplish this goal? *(Provide 2 specific actions)*

1. Talk to some of the technical people in my network about this idea

2. Ask them about what they would like to see in the product

How will you know you've accomplished your goal?

When I have discussed and recorded feedback and ideas from at least 10 other potential stakeholders - maybe more.

Describe why this objective is important to you?

I want to make sure I cover as many bases as possible with this idea. I know I will not alone envision all the possible good features I can add to the product.

What program learning outcome(s) does the proposed objective meet? *(Refer to the Program Learning Outcomes" section on page 3)*

5 - Collaborate effectively with a wide range of professionals, in person and virtually.