Theory

1. **What are the six principles of DevOps? Please describe each of them briefly.**

   CUSTOMER-CENTRIC ACTION - In DevOps we focus on meeting operations and user requirements and make sure the product is benefits as the customers requirements and desire. This also lowers the product cost.

   CREATE WITH THE END IN MIND - It has only one goal, and it is to deliver the best product in the market.

   END-TO-END RESPONSIBILITY - It is from the idea to the product is launched.

   CROSS-FUNCTIONAL AUTONOMOUS TEAMS - What can you do for the team? Design, alright you will be there with…

   CONTINUOUS IMPROVEMENT - It's an eye to look and see how to improve the product.

   AUTOMATE EVERYTHING YOU CAN - Automate for streamlines operations, architecture and to use cloud services in order to version control code.

2. **In your own words describe what continuous integration is.**

Continuous integration is a software development practice. Usually each person integrates at least daily and then can integrate their work frequently. Each integration can then be verified by an automated build and automated test.

3. **What is the difference between DevOps and Agile teams?**

Agile refers to an iterative approach which focuses on collaboration, customer feedback, and small, rapid releases. **Agile** helps to manage complex projects.

DevOps brings development and operations teams together. **DevOps** central concept is to manage end-to-end engineering processes.

4. **What is project automation?**

Project automation is automation of; developing the code, testing it, deploying the test infrastructure, running end-to-end tests, deploying the code, collecting metrics from production and end-to-end orchestration of the DevOps pipeline.

There are four steps to achieving this.

1. **Evaluate your needs** - what is your needs and goals, get feedback and keep up on the latest technology.
2. **Identify Bottlenecks** - where are the bottlenecks, understand why and how to resolve this.

3. **Consider the return on investment** - backlog items, which one will yield a return on investment.
4. **Continuously assess and re-evaluate** - go back and reassess work items, bottlenecks. What can be improve how to grow and be more successful.

5. **List three tools that you can use for project automation.**

GULP - While you developing your website, common tasks gets automated.

GRUNT - Grunt automate literally anything and there is many plugins to choose from. It is used on top of NodeJS.

WEBPACK - Webpack allows you to point to your local files and then decide how to use them in the final JavaScript bundle.

Link to Case Study.