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Subject: AdvDevOps

Assignment 1b: Cloud 9

Aim: To understand the usage of Cloud9

Theory:

AWS Cloud9 is a cloud-based integrated development environment (IDE) provided by Amazon Web Services. It allows developers to write, run, and debug code using just a web browser. Cloud9 comes pre-packaged with essential tools for popular programming languages, such as Python, JavaScript, and PHP, among others, making it a convenient environment for software development.

Key Features of AWS Cloud9:

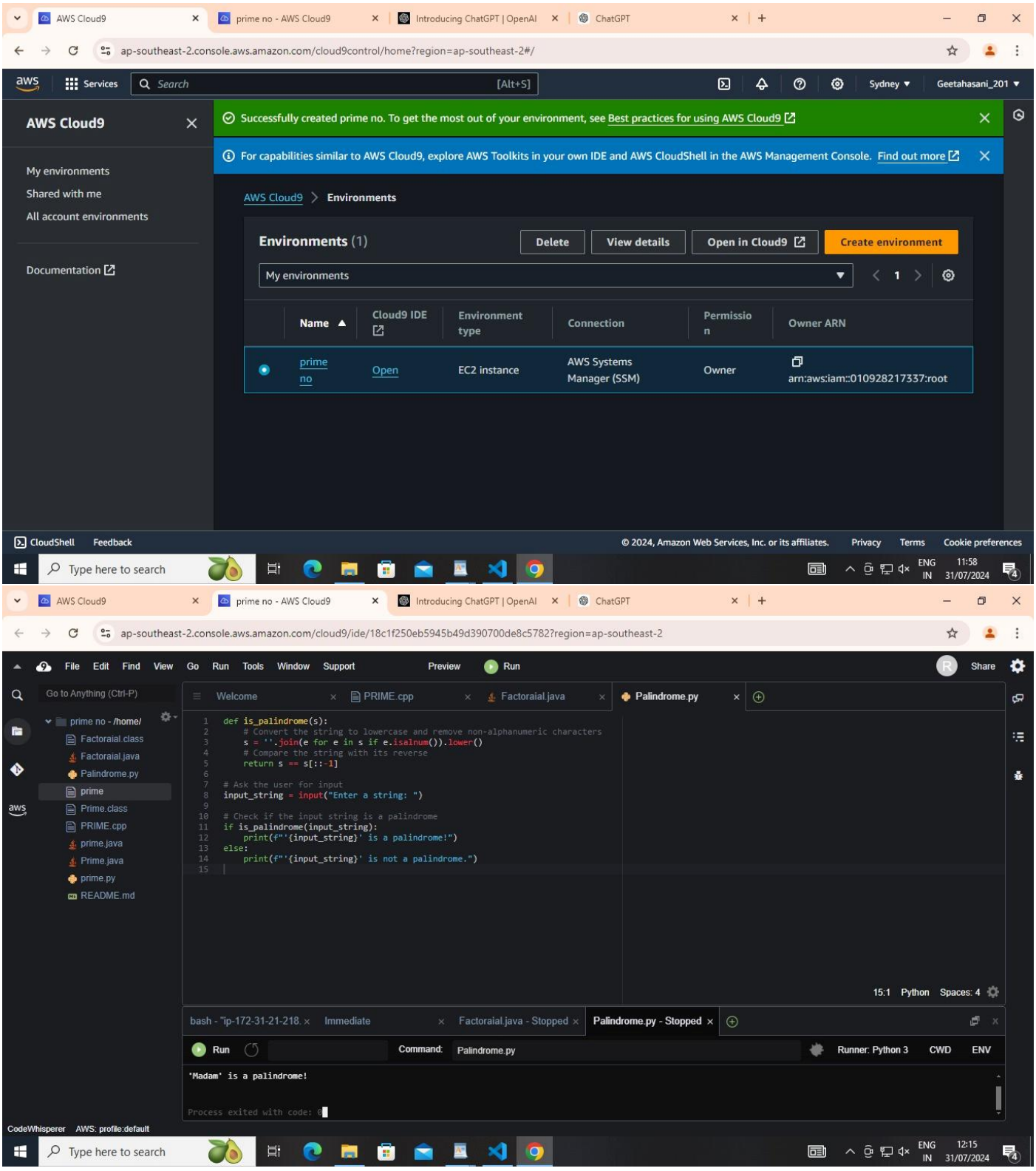
1. **Cloud-Based IDE:** Since Cloud9 is hosted in the cloud, you can access your development environment from anywhere, using any device with an internet connection and a web browser. There's no need to install or configure software on your local machine.
2. **Pre-Configured Environment:** Cloud9 comes with a fully configured environment that includes essential tools, SDKs, and libraries for various programming languages and AWS services. This saves you time in setting up your development environment.
3. **Real-Time Collaboration:** Cloud9 allows multiple developers to collaborate in real-time. You can share your development environment with your team, and they can simultaneously edit code, share terminal sessions, and chat within the IDE.
4. **Integrated Terminal:** The IDE includes an integrated terminal that provides access to the command line of your underlying compute resources. You can run commands, install packages, or manage your environment directly from the terminal.
5. **Debugging and Code Editing:** Cloud9 provides robust debugging tools and an intelligent code editor with features like syntax highlighting, code completion, and code folding. This makes it easier to write and debug code efficiently.
6. **Integration with AWS Services:** Cloud9 is tightly integrated with AWS services, allowing you to easily develop and deploy applications on the AWS cloud. You can directly interact with AWS resources such as EC2 instances, Lambda functions, and S3 buckets from within the IDE.
7. **Serverless Development**: Cloud9 is particularly useful for serverless development. You can write, test, and debug AWS Lambda functions and other serverless applications directly from the IDE, and deploy them to AWS with just a few clicks.
8. **Customizable Environment:** While Cloud9 comes with pre-installed tools, you can customize your environment by installing additional packages, libraries, or frameworks as needed.
9. **No Local Resources Required:** Because everything runs in the cloud, Cloud9 doesn't consume local resources on your device. This is especially beneficial if you're working on a device with limited computing power.

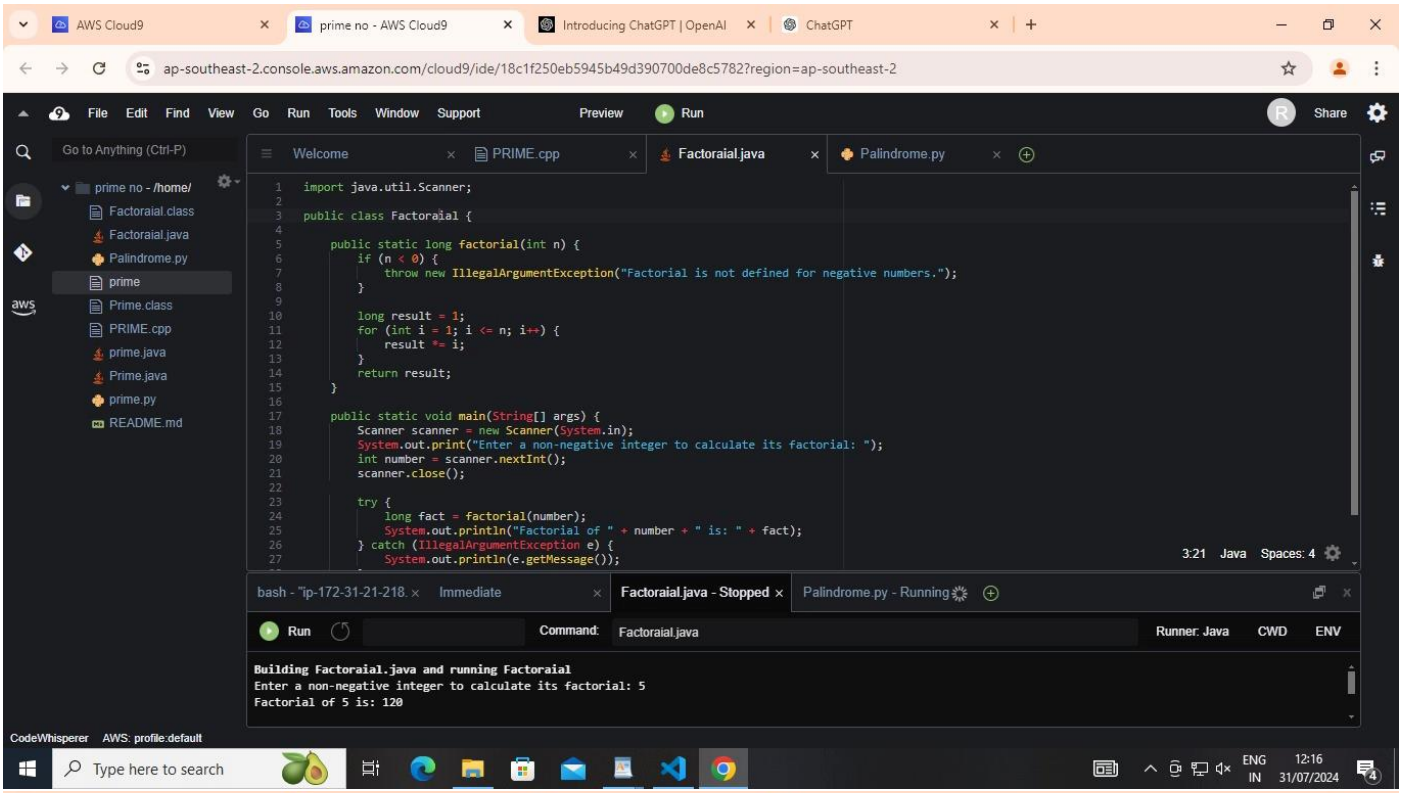
Use Cases:

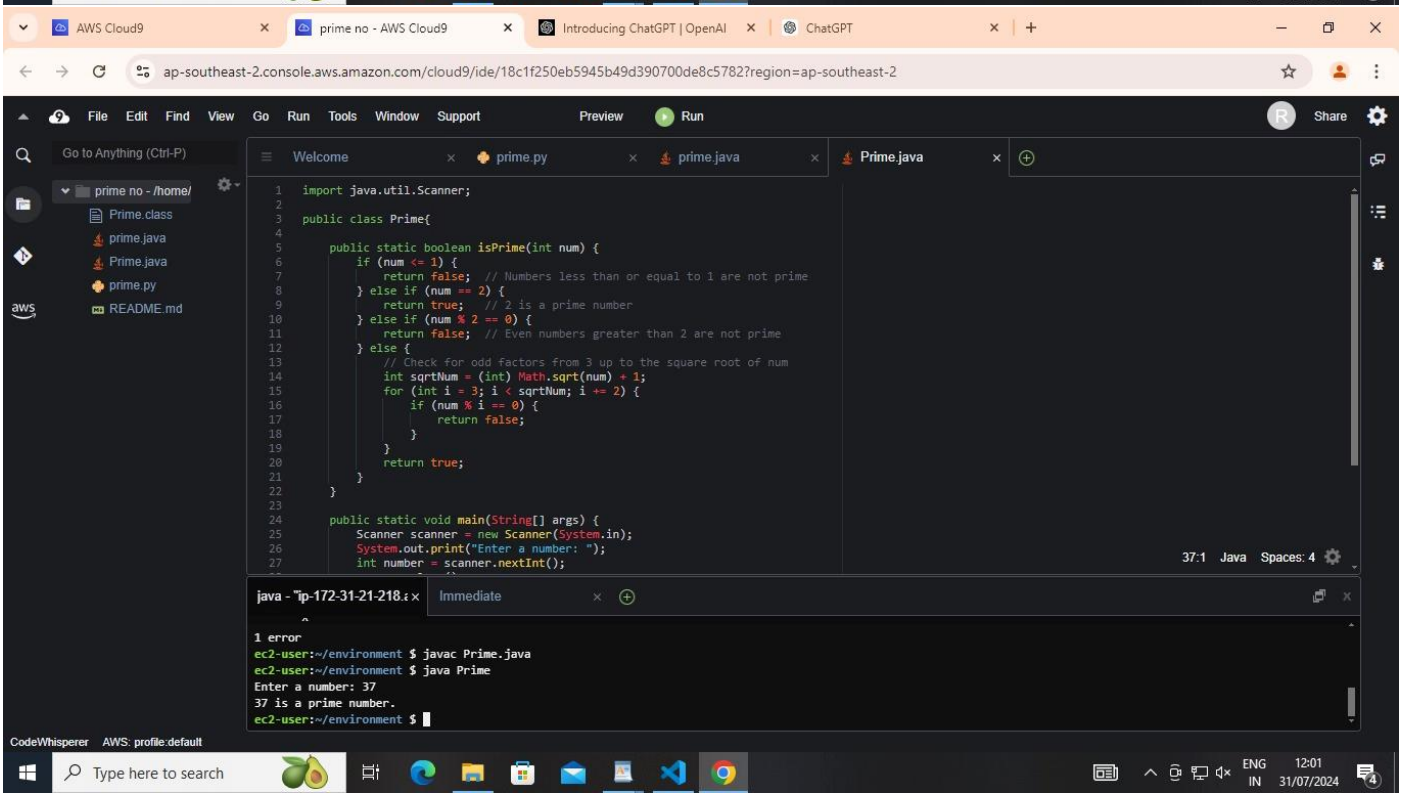
- **Web Development:** Build and deploy web applications using various frameworks and tools.
- **Serverless Application Development:** Write, test, and deploy serverless applications using AWS Lambda and other serverless services.
- **Real-Time Collaboration:** Collaborate on code with other developers, making it ideal for pair programming or remote team collaboration
- **Learning and Experimentation:** Cloud9 is a great tool for learning programming, experimenting with new languages, or testing new ideas without the need for a complex setup.

AWS Cloud9 simplifies the development process by providing a fully managed, cloud-based environment that integrates seamlessly with the rest of the AWS ecosystem, making it a powerful tool for developers working in the cloud.

Implementation:







Conclusion: Learned about Cloud9. LO1 achieved.