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Final Report– Spring 2024
Use CDK to build a Software Delivery Pipeline

- **Step-by-Step Instructions** • GitHub URL to the source code

Answer:

My code includes step-by-step instructions.

```
import * as cdk from '@aws-cdk/core';
import * as codecommit from '@aws-cdk/aws-codecommit';
import * as codebuild from '@aws-cdk/aws-codebuild';
import * as codepipeline from '@aws-cdk/aws-codepipeline';
import * as codepipelineactions from '@aws-cdk/aws-codepipeline-actions';

export class SoftwareDeliveryPipelineStack extends cdk.Stack {
  constructor(scope: cdk.Construct, id: string, props?: cdk.StackProps) {
    super(scope, id, props);

    // here to Create CodeCommit repository
    const repo = new codecommit.Repository(this, 'MyAppRepo', {
      repositoryName: 'my-nodejs-app',
    });

    // this to Create a CodeBuild project
    const project = new codebuild.PipelineProject(this, 'MyAppBuild', {
      buildSpec: codebuild.BuildSpec.fromObject({
        version: '0.2',
        phases: {
          install: {
            commands: ['npm install'],
          },
          build: {
            commands: ['npm run build'],
          },
        },
        artifacts: {
          'base-directory': 'dist',
          files: ['**/*'],
        },
      }),
    });

    // Create CodePipeline
    const pipeline = new codepipeline.Pipeline(this, 'MyAppPipeline');
```

```

// Add source stage to pipeline
pipeline.addStage({
  stageName: 'Source',
  actions: [
    new codepipelineActions.CodeCommitSourceAction({
      actionName: 'CodeCommit_Source',
      repository: repo,
      output: new codepipeline.Artifact(),
    }),
  ],
});

// Add build stage to pipeline
pipeline.addStage({
  stageName: 'Build',
  actions: [
    new codepipelineActions.CodeBuildAction({
      actionName: 'CodeBuild_Build',
      project,
      input: new codepipeline.Artifact(),
      outputs: [new codepipeline.Artifact('BuildOutput')],
    }),
  ],
});

// Add deploy stage to pipeline
pipeline.addStage({
  stageName: 'Deploy',
  actions: [
    new codepipelineActions.LambdaInvokeAction({
      actionName: 'Deploy_Lambda',
      lambda: new lambda.Function(this, 'MyLambdaFunction', {
        runtime: lambda.Runtime.NODEJS_14_X,
        handler: 'index.handler',
        code: lambda.Code.fromAsset('lambda'),
      }),
      inputs: [new codepipeline.Artifact('BuildOutput')],
    }),
  ],
});
}
}

const app = new cdk.App();

```

```
new SoftwareDeliveryPipelineStack(app, 'SoftwareDeliveryPipelineStack')
```

- What is different from our classroom lab?
- List all articles, websites, and repositories that you referenced/used in the report

Reference

<https://aws.amazon.com/blogs/developer/cdk-pipelines-continuous-delivery-for-aws-cdk-applications/>

<https://github.com/findy-network/findy-agent-infra/blob/master/.github/workflows/pr-target.yml>