180.PROTEİN DEVOPS BOOTCAMP BİTİRME PROJESİ,

Your assignment is to fully cover the DevOps cycle and create a full-on CI/CD and cloud infrastructure.

ASSIGNMENT

- Create a basic React.js app by following the [Facebook's documentation](https://github.com/facebook/create-react-app). You can leave the application with its default settings.
- Create a Dockerfile for your app. Try to form an image with the smallest possible size.
- Design and write a GitLab CI/CD pipeline featuring your Dockerfile for your brand new app.
- Carefully plan your stages. Apply the most suitable DevOps standards and follow the guidelines to achieve the best practices.

DEPLOY APPLICATION TO AWS.
- Use **Terraform** to provision the infrastructure.
- Application should be running on ECS Fargate.
- Make sure to use the ideal VPC and security group settings.
- Application load balancer must be configured in front of the service.
- Feel free to include or use any other AWS service.

DEPLOY THE APPLİCATİON TO KUBERNETES.
- Write the required core manifest files.
- Explain the details in your project's README. Describe your strategy and choices. Also don't forget to write comments for necessary lines in the Dockerfile and GitLab YAML.

BONUS
- Configure auto-scaling onto your Fargate instance. Scale-up when CPU is above %50 and scale-down when CPU is below %20.
- Create the proper Cloudwatch dashboards and metrics for monitoring the performance of the application.
- Draw your AWS architecture, explain the connections and relations between your configured services. You can use draw.io for this process and export the document once you're done and include the file in your GitLab project.
- Instead of using GitLab's shared runners, you can configure your own runner. If you do so, please share the runner's config.toml and clarify the implementation process.
- Write a script (Ansible & Shell) that sends a notification by E-mail if the disk usage exceeds 90% in an operating system using any Linux distribution (You can use any Gmail address as the sender E-mail address). İ

OUTPUT
- GitLab Project
- Terraform Script Stack

- Kubernetes Manifest Files

README
- **draw.io export (optional)**
- **config.toml (optional)**