

# Deploying an app to AWS EC2 & RDS

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# Pre-requisites

1. An AWS account
  - a. WARNING – AWS requires billing information. Deviating from this guide or leaving AWS resources up after the course may result in charges
2. A docker account
3. Docker desktop installed

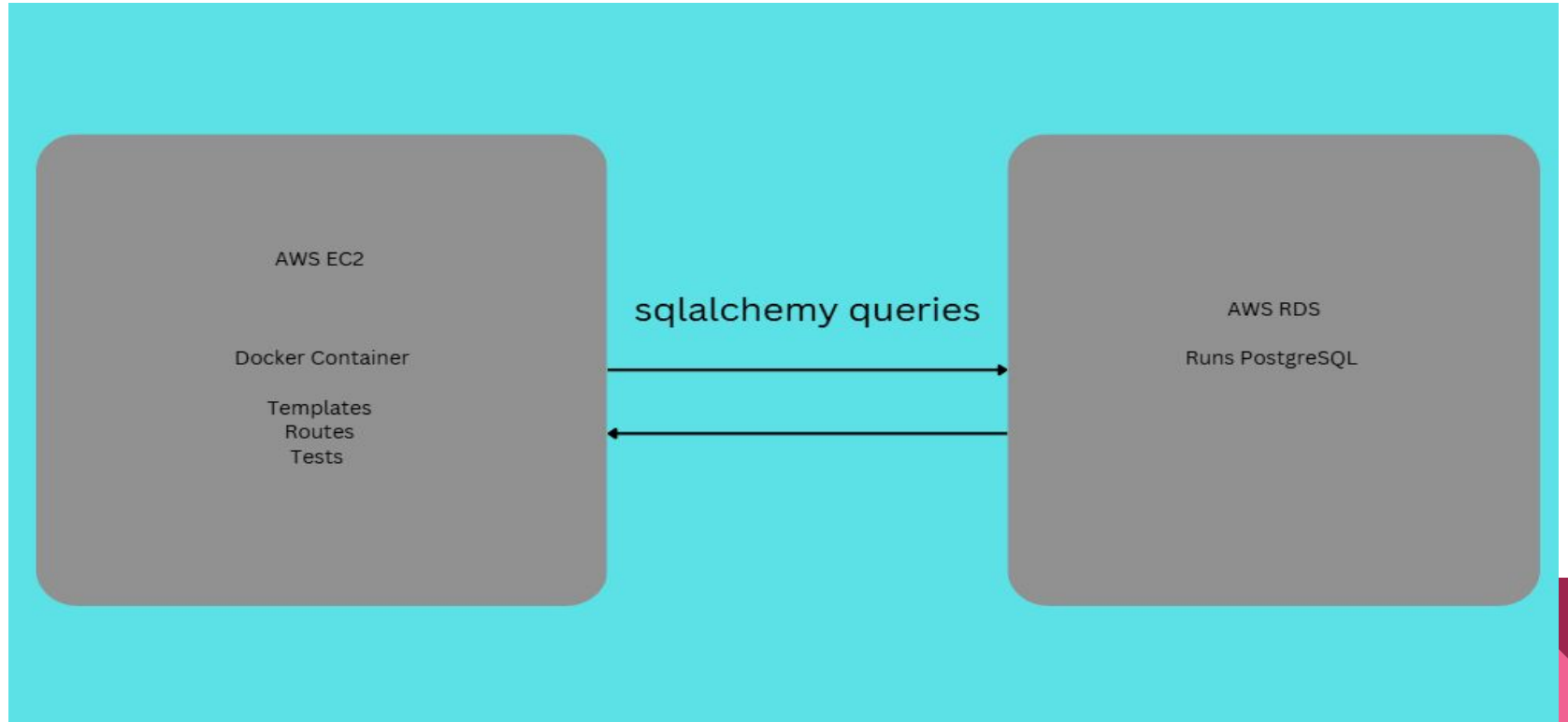
Steps for all of these can be found in `awsSetup.md` in the Smile App Tasks repository



# Overview

- AWS is a cloud service provider which will host your app on a remote server so that it can be accessed over the internet
- AWS offers several services (many of which are not free). We will be using EC2 and RDS
  - EC2 - Elastic Cloud Compute. These are virtual machines which run on AWS servers and will actually run our code.
  - RDS - Relational Database Services. This is a dedicated server running PostgreSQL (could be MySQL, Oracle, etc.)
- EC2 is not powerful enough to actually build the project, so we need to use Docker to build the project locally, and then run the container on the AWS server (more on this later)

# Visual overview



# Docker

- Allows us to containerize code
  - Can be thought of as virtual machines which only exist to run our code.
  - Built locally according to a Dockerfile – special file which gives the container instructions to build.
- Docker Hub – like GitHub but for containers
  - Allows us to build the container on our local machines, and then upload the running container to DockerHub
  - We can pull the container on EC2 instance so that we do not have to actually build the project and run it on AWS



# Deployment demo

