

## CAB432 A01: REST API Project (Video)

2025/8/29

30 Points Possible

Attempt 1



In Progress

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**View Rubric****REST API project - marking criteria**

Criteria	Ratings			Points
Core - Containerise the app	<b>3 pts</b> <b>Full marks</b> Source code contains a Dockerfile. A Docker image has been created for the application server and is present in the CAB432 AWS account ECR.	<b>1.5 pts</b> <b>Half marks</b> The Dockerfile may be missing or not suitable, or the image is not present on ECR.	<b>0 pts</b> <b>No marks</b> No evidence of using a Docker image or no/insufficient evidence presented.	/ 3 pts
Core - Deploy the container	<b>3 pts</b> <b>Full marks</b> Application Docker container has been deployed to an EC2 instance from ECR.	<b>1.5 pts</b> <b>Half marks</b> Application is running on EC2 but not within a Docker container, or running within a Docker container but not on EC2.	<b>0 pts</b> <b>No marks</b> Application is not running on EC2 or within Docker, or no/insufficient evidence presented.	/ 3 pts
Core - User login	<b>3 pts</b> <b>Full marks</b> Application has a basic user login method (eg. username/password). Subsequent requests are authenticated using JWT. Any publicly accessible API endpoints are considered acceptable. There is meaningful distinctions between different users, such as different levels of access (standard user vs admin user) or functionality that depends on the user (eg. data ownership, per-user settings, etc.)	<b>1.5 pts</b> <b>Half marks</b> Not all non-public resources check for authentication, or user login method missing (eg. using hard coded token rather than obtaining via login.) Distinctions between users is minimal or not relevant to the main application functionality. Implementation problems that are of moderate severity.	<b>0 pts</b> <b>No marks</b> Authentication not present or no/insufficient evidence presented.	/ 3 pts

## REST API project - marking criteria

Criteria	Ratings			Points
Core - REST API	<b>3 pts</b> <b>Full marks</b> Application uses the full suite of HTTP features, including methods, headers, and responds with appropriate status codes. Endpoints are appropriately labelled and are logical.	<b>1.5 pts</b> <b>Half marks</b> The application has an API but not all concepts of REST, or not all features of HTTP are appropriately utilised.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 3 pts
Core - Data types	<b>3 pts</b> <b>Full marks</b> Application stores at least two different types of data, not including user login data, that have different usage requirements within the application.	<b>1.5 pts</b> <b>Half marks</b> Only one type of data is used, or the difference between types of data used is not significant. Implementation problems that are of moderate severity.	<b>0 pts</b> <b>No marks</b> No data is stored or no/insufficient evidence presented.	/ 3 pts
Core - CPU intensive task	<b>3 pts</b> <b>Full marks</b> Application uses at least one CPU intensive process that can be triggered by API requests. The process is highly relevant to the functionality of the application.	<b>1.5 pts</b> <b>Half marks</b> The CPU intensive process is only somewhat relevant to the application. Implementation problems that are of moderate severity.	<b>0 pts</b> <b>No marks</b> There is no CPU intensive process or no/insufficient evidence presented.	/ 3 pts
Core - CPU load testing	<b>2 pts</b> <b>Full marks</b> Demonstration of a script or manual method for generating enough requests to load down the server to > 80% CPU for an extended time (eg. 5 minutes)	<b>1 pts</b> <b>Half marks</b> The method generates load, but does not load down > 80% CPU, or can only do so for a short amount of time. Implementation problems that are of moderate severity.	<b>0 pts</b> <b>No marks</b> No method of loading down the server or no/insufficient evidence presented.	/ 2 pts
Additional - Extensive API features	<b>2.5 pts</b> <b>Full marks</b> The API has features like versioning, pagination, filtering and sorting. These are consistently implemented across all necessary end-points.	<b>1.25 pts</b> <b>Half marks</b> Some advanced features have been attempted but are not fully functional.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts
Additional - External API(s)	<b>2.5 pts</b> <b>Full marks</b> The application makes use of at least one external API either as at least one primary source of data, or as at least two sources of relevant but secondary data (such as recommendations for related external videos along with thumbnails).	<b>1.25 pts</b> <b>Half marks</b> The application uses one external API as a source of secondary data, or there are problems with the implementation.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts

## REST API project - marking criteria

Criteria	Ratings			Points
Additional - Additional types of data	<b>2.5 pts</b> <b>Full marks</b> The application uses three or more kinds of data (including two from core criteria) that have distinct requirements for storage and use that would be best suited to distinct cloud services.	<b>1.25 pts</b> <b>Half marks</b> The application uses three or more kinds of data, but the requirement for more than two kinds is not well argued, or there are problems with the implementation.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts
Additional - Custom processing	<b>2.5 pts</b> <b>Full marks</b> The application features a significant amount of newly implemented custom domain-specific processing, such as a custom machine learning model. If the implementation uses existing code (eg. a ML framework or physics engine) then there is a significant amount of customisation or configuration specific to the application.	<b>1.25 pts</b> <b>Half marks</b> The domain-specific processing is largely based on existing implementations with a modest amount of customisation or configuration.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts
Additional - Infrastructure as code	<b>2.5 pts</b> <b>Full marks</b> Use of infrastructure-as-code technologies such as Docker compose, AWS CDK, or AWS CloudFormation to deploy the application to AWS. The application can be fully deployed, including launching a EC2 instance and all necessary containers, from a single IaC command.	<b>1.25 pts</b> <b>Half marks</b> IaC is used to launch an EC2 instance, or Docker containers, but not both.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts
Additional - Web client	<b>2.5 pts</b> <b>Full marks</b> Your application includes a well designed, full featured client, accessible with a web browser, that interfaces with all endpoints of your API.	<b>1.25 pts</b> <b>Half marks</b> The web client is functional, but does not make use of some important endpoints or does so in a trivial manner, or the design is not very usable for intended use cases.	<b>0 pts</b> <b>No marks</b> Not attempted or no/insufficient evidence presented.	/ 2.5 pts
Additional - Upon request	<b>2.5 pts</b> <b>Full marks</b> The features is well implemented, according to the standard agreed upon advanced with the unit coordinator.	<b>1.25 pts</b> <b>Half marks</b> The feature is implemented, but not to the agreed standard.	<b>0 pts</b> <b>No marks</b> Not attempted, no/insufficient evidence presented, on not agreed upon in advance with the unit coordinator.	/ 2.5 pts

REST API project - marking criteria

Criteria	Ratings	Points
		Total points: 0

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