



PROGRAMMING ASSIGNMENT

ACE Program

The final round interview stage for the Developer role at RBC involves a programming assignment. It will be used as a discussion point and will help show your strengths as a developer and gauge how comfortable you feel working with our technology stack.

Good luck !

OBJECTIVE

We are looking for minimal proficiency in both front-end and back-end technology stacks. We expect you to have both components implemented, and you should shine in at least one of them. The scope of the assignment doesn't need to be fully achieved, but the application quality has to be up to your own standards. You're not constrained to perform the assignment in a pre-defined timeframe, so take the needed time to demonstrate your creativity and skillset! You are kindly asked to host your source code online (ie Github).

ASSIGNMENT REQUIREMENT

Please create a 3-tier web application for an online Robot shop store. Using this application, users should be able to see the robots which are available for purchase, add new robots to the robot store's inventory, and remove robots which have been sold. Efforts in testing, documentation and automated deployment would be considered as an advantage.

Front End : Show your creativity by designing a UI

- Create a front end **Angular** application.
- Provide all necessary user interfaces to view, add, and delete robots from the store.
- This application should consume the REST API exposed by the Robot Store back end services described below.

Back End Services: Web services required to support your Angular application

- Create a back end Java application using **Spring Boot**.
- Implemented in **Java** and exposing a **REST web service** consumed by front-end Angular application
- **JSON** request/response payloads
- Robot Store data persisted in data store, accessed via a **Java Persistence API**

Data Persistence:

- Use any in-memory data persistence/database you would like.

Scope:

- For the purposes of this assignment, focus on only the ability to **list**, **find**, **add**, and **delete** robots from the Robot store:

robot			▼
POST	/robot	Add a new robot to the store	🔒
GET	/robot/{robotId}	Find robot by ID	🔒
DELETE	/robot/{robotId}	Deletes a robot	🔒

Stretch Goals:

- Component deployed in **any** cloud platform of your choice (IBM Bluemix, RedHat OpenShift, Heroku,, ...)
- Have authorization implemented (user A can find/view only, user B can Add/find/view/delete)

ASSESSMENT

ACE Resourcing will be setting up a final round interview for you. This will be a 1-1.30 hour interview with members of the teams.

During the interview:

- Please bring your laptop to the interview
- You will be asked to perform a demonstration of your application for the 3 operations through the front-end and through the rest of the API.
- You will be asked to do a code change of both components and re-run the full delivery cycle and to do the demonstration again
- Since you are hosting your assignment code online, the team will be able to review your assignment prior to the interview

</> This assignment is for you only. Please do not share with others. </>

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