

Assignment for Screening of Candidates

Oritso Private Limited

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1. INTRODUCTION

1.1. Purpose

The purpose of this document is to assess the competency and skills of candidates, assessing them on key design and development areas

1.2. Assumptions & Constraints

1.2.1. Assumptions

- 1.2.1.1. It is assumed that the candidates are well versed in the key requirements of the IT sector, knowing the full complexity and efforts it entails to design and build enterprise grade mission critical applications.
- 1.2.1.2. It is further assumed that the candidates are trained in a well rounded fashion and are familiar with a spectrum of technologies which make a solution work in a seamless manner.
- 1.2.1.3. Usage of standard SCM tools like Github/Gitlab/Bitbucket/Gitea are known to the candidates.
- 1.2.1.4. Usage of standard project management tools like MS DevOps/GitHub/JIRA are known to the candidates.
- 1.2.1.5. Candidates are well versed with key database concepts.
- 1.2.1.6. Candidates are well versed with concepts of frontend and backend.
- 1.2.1.7. Candidates are well versed with the MVC pattern and can make good use of the same.
- 1.2.1.8. Candidates are well versed with alternate Operating Systems like Linux or/and BSD.
- 1.2.1.9. Candidates familiar with any of the mainstream programming languages such as Java, C#, Python or PHP. Knowledge of C, C++ will be a plus but not mandatory.

2. ASSIGNMENT Process

2.1. Structure of the process

- 2.1.1. This document will provide details of what has to be done. Candidates are required to read the whole document carefully.
- 2.1.2. Candidates are required to provide a full working demo. The whole code should be hosted on a Github public repository from where it can be accessed directly without need for any special permission.
- 2.1.3. The candidates should document the entire project in Github itself, putting entire documentation in a .md (markdown) format. The structure of the document should be as follows -
 - 2.1.3.1. Overview of what is being built
 - 2.1.3.2. Explanation of DB Design along with -
 - 2.1.3.2.1. ER Diagram
 - 2.1.3.2.2. Data Dictionary
 - 2.1.3.2.3. Documentation of Indexes used
 - 2.1.3.2.4. Whether Code first or DB First approach has been used and why?
 - 2.1.3.3. Structure of the application detailing -
 - 2.1.3.3.1. Whether Single Page Application (SPA) had been used along with API binding or
 - 2.1.3.3.2. Standard MVC server side page rendering has been used. Any of the SPA or MPA approaches can be used
 - 2.1.3.4. Frontend Structure -
 - 2.1.3.4.1. What kind of frontend has been used and why?
 - 2.1.3.4.2. Candidates can either use a web page frontend or a mobile application. Any of these are okay.
 - 2.1.3.5. Build and install -
 - 2.1.3.5.1. Environment details along with list of dependencies
 - 2.1.3.5.2. Instructions on how to compile or build a project.
 - 2.1.3.5.3. Instructions on how to run or install the project

2.1.3.6. General Documentation not covered here

- 2.1.4. The duration allowed for assignment is 7 days from the date of receipt of assignment from the candidates.
- 2.1.5. Projects submitted after expiry of above timeframe will be deemed to be not qualified.
- 2.1.6. Candidates whose assignments are shortlisted will be invited for a Face 2 Face interaction explaining their project in person along with a general discussion on the same.
- 2.1.7. Oritso recruitment board will be the final authority in assessing and finalizing selection of a candidate.
- 2.1.8. Candidates hereby agree to all the terms and conditions of this assignment by taking part in this process.
- 2.1.9. Any disputes arising out of this process will be settled by the Oritso recruitment board and the board's final decision will be binding on the candidate.

2.2. Structure of the Assignment

2.2.1. Objectives

- 2.2.1.1. To test the candidate's approach (taken) to given problem
- 2.2.1.2. To test the candidate's ability to plan a work packet execution
- 2.2.1.3. To test the candidate's problem solving skills
- 2.2.1.4. To test the candidate's knowledge in backend technologies
- 2.2.1.5. To test the candidate's knowledge in frontend technologies
- 2.2.1.6. To test the candidate's knowledge in database systems
- 2.2.1.7. To test the candidate's knowledge in documentation
- 2.2.1.8. To test the candidate's knowledge in using IT enabled systems effectively
- 2.2.1.9. To test the candidate's ability to communicate their solution and its intricacies to external audience

2.2.2. Areas

- 2.2.2.1. Database Management System
- 2.2.2.2. Backend Modules (MVC/API) based
- 2.2.2.3. Frontend Module - SPA or MVC/MPA based

2.2.3. Choice of Technologies

- 2.2.3.1. **Programming Language** - Any of following programming languages may be used -
 - 2.2.3.1.1. C#
 - 2.2.3.1.2. Java
 - 2.2.3.1.3. Python
 - 2.2.3.1.4. PHP
- 2.2.3.2. **RDBMS** - Any of the following RDBMS may be used -
 - 2.2.3.2.1. MS SQL Server
 - 2.2.3.2.2. Postgre SQL
 - 2.2.3.2.3. MySQL
 - 2.2.3.2.4. Oracle
- 2.2.3.3. **Fontend Technologies** - Any web based format or Mobile app development framework may be used

2.2.4. External Help

- 2.2.5. Candidates are free to see external help for completion of this assignment
- 2.2.6. However the shortlisted candidates, post evaluation of assignments will be required to attend an interview explaining the entire project to Oritso's evaluation committee
- 2.2.7. Candidates are expected to explain entire project on their own as it's assumed that external help was only taken to understand the assignment and not for getting it done by someone else without learning anything

3. THE ASSIGNMENT

3.1. Objective

The assignment should demonstrate following areas in MVC pattern programming for the candidate -

- 3.2. Create - Ability to create records from the web/mobile front end
- 3.3. Read - Ability to read records from the web/mobile front end
- 3.4. Update - Ability to update records from the web/mobile front end
- 3.5. Delete - Ability to delete records from the web/mobile front end
- 3.6. Search - Ability to search records from the web/mobile front end

3.7. Assignment Idea

- 3.8. Implement a Task Management application which will enable creating a task and adding details to it
- 3.9. Users should be able to perform all objective points as listed in sub bullets of section 3.1

3.10. Data Structure

- 3.11. Task Title
- 3.12. Task Description
- 3.13. Task Due Date
- 3.14. Task Status
- 3.15. Task Remarks
- 3.16. Created On (Time Stamp)
- 3.17. Last Updated on (Time Stamp)
- 3.18. Created By (Name and Id of the user who created the task)
- 3.19. Last Updated By (Name and Id of the user who created the task)