Introduction:

The testing report provides an overview of the testing activities conducted for the Earn It Project. This report aims to summarize the testing process, methodologies employed, identified issues or bugs, and the overall quality and performance of the product. The testing phase plays a critical role in ensuring that the product meets the required standards, functionality, and user expectations.

In this report, we will discuss the objectives and scope of the testing, provide a summary of the testing environment, outline the testing methodologies utilized, and present the key findings and observations. The report will also highlight any significant issues or challenges encountered during the testing process and outline the recommendations for improvement.

Test Environment:

All tests carried out were tested on Laptop, in different browsers such as Opera, Chrome, Firefox.

Functional testing:

Back-end and API:
To test out functionalities, we developed some test clients to make sure the APIs work properly. These clients include one for the student, one for the company and one for the admin which tests basic functionalities such as logging in or returning the corresponding list of company/hired students, or returning a list of submissions in a specific week.
However, we only use these clients for basic GET APIs. For POST or PUT APIs, we want to directly test these requests through the website to allow for custom data without having to modify the code for each request. By doing this, we could also test the front-end, and make sure that the user experience is fluid and smooth.

Error prevention & security:
We also tested possible errors, such as registering using an existing email, attempting to access different resources when the user is not permitted. Apart from that, we also tested input fields against SQL and XSS attacks to make sure that all inputs made by the user are sanitized.

Front-end:
For the front-end, we tested all websites to make sure that all links and buttons work as expected, and the user will not get soft-locked in any scenario.

Test scenarios:

Account authentication:

Function	Test case	Results
Log in	Submit correct credentials	Correctly redirects to corresponding homepage
	Submit incorrect credentials	The web page displays a alert
Register as a student/company	Correctly fill in all required fields	Redirects back to the login page, indicating success registration
	Purposely leave some fields empty or type invalid data	The page displays an alert with message depending on the error in the form
Log out	Click logout button in the sidebar	Redirects back to the login page, and the user are not able to visit some pages
Accessing resources	Manually going to the incorrect homepage (ex: student accessing company page)	The request is being blocked as an error page shows up

Students:

Function	Test case	Results
Show company list	Go to the home page	A list of company assigned to the student is shown
Show company description	Click on each job in the job list	An overlay is shown containing description
Submit working hours	Submit working hours in a specific day	A message is shown, stating that submission is uploaded
	Submit working hours in a day outside of allowed range (outside the current week)	The submission is still uploaded, which should be blocked
Manage submissions	Accept/reject Company counter-offer	_Accept: The new suggested hours from the company will now be the total worked hours in a week for that student _Reject: The submission is now

		forwarded to the admin to resolve
	View daily submissions	A list of submissions are shown in each day in a week
	View overview submissions	A list of submissions with total hours are shown, grouped by its status
Export invoices	Download invoices	The PDF is in correct format and contains correct data

Companies:

Function	Test case	Results
Show student list	Go to the homepage	Correctly shows all hired students with corresponding job position
Manage submissions	Accept/reject student submission	_Accept: When the company accepts student's submission, an alert shows up to indicate success and an invoice instance will be added to database _Reject: When the company rejects a student's submission, a popup form will appear to fill in the suggested hours, then the new suggested hours will be sent back to the student.
	View daily submissions	Click view notes on each student to see the detailed daily submission
	View overview submissions	Submissions will be classified into 4 different sections: pending, in progress, rejected and accepted
Export invoices	Download invoices	The PDF is in correct format and contains correct data

Admin:

Function	Test case	Results
View employments	Go to the homepage	Shows an extensive board of students, jobs and companies

Linking jobs	Link a student and a job	A message indicates that the linking was successful
	Link a student and a job while they're already linked	Returns an error
Job creation	Type in all fields	A message indicates that the creation was successful
	Leave some fields missing	Returns an alert depending on which field
Resolve submissions	Expand the "important" section in the Overview page	Admin will check the appealed submission and then give the final decision by filling in the form indicating the final worked hours for the student.

Limitations:

While the website can be used on laptop or PC with horizontal displays, the website is not yet compatible with mobile devices, as the sidebar will not be shown when the screen width becomes too small.

Conclusions:

While the website runs fine under correct handling, some of the restrictions and constraints are not being implemented yet. Overall, the test report confirms that the website meets the requirements and expectations set forth during its development. It is recommended that the identified areas for improvement be addressed in order to further enhance the website's performance and user satisfaction.

With its solid foundation and continuous improvement efforts, the website is well-positioned to succeed and provide a valuable online experience to its users.