Institution Details

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| **Province** | Sindh | **City** | Karachi |
| **Institution** | National University of Computer and Emerging Sciences (FAST-NU) | **Campus** | Karachi |
| **Department** | Computer Science | **Degree Level** | BS |
| **Degree Program** | Computer Science | **Telephone** | 090078601 |
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Supervisor Details



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| **Qualification** |  | | |

Co-Supervisor Details



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| **Qualification** | MSCS | | |

Head of Department Details



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Project Details



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| **Project** Title | FreeGx - Freelancing Platform with Project Management | | | |
| Group Details | Member 1 Name: Saad Ur Rehman  Member 1 Roll#: 19K-0218 | | Member 2 Name: Abdul Shakoor  Member 2 Roll#: 19K-1373 | Member 3 Name: Muhammad Anas  Member 3 Roll#: 19K-1499 |
| Project Area of Specialization | Web Application | | | |
| Project Start Date | September 2022 | Project End Date | | May 2023 |
| Project Summary | After the pandemic COVID-19, many people lost their job and shifted to the online mode of working in search of authentic and reliable freelancing platforms, some of them succeeded while some failed to get projects as they were new in the market. Those who got the projects still faced many problems on the platform like there were no project management tools, progress reports, adding team members as co-worker to reduce workload, and many others.  To cater to all of these problems, we came up with an innovative approach to increase user experience and productivity, we call it FreeGx. FreeGx is a web application where you can do freelancing with ease and search for sellers with extraordinary gigs to provide you with the best quality experience. Through this platform, Seller can add co-workers who will work along with the team lead which increases interpersonal and group-working skills. The seller can share the work breakdown structure with the co-workers so that they will get a clear idea of relevant tasks to perform. The seller can also share progress reports and documents with clients. There will be other features to address previous problems in freelancing platforms. | | | |
| Project Objectives | The main objectives of our project are as follows:   * To provide a platform to work in a collaborative environment. * To work with fellow co-workers to increase the productivity of the task assign. * To help create Work Breakdown Structure to well organize the projects. * To maintain weekly or monthly progress reports between sellers and clients. | | | |
| Literature Review/Background Study | We know there are multiple freelance platforms but what made our idea different from others needed some core requirements from the users using the platform that is why we did extensive research by creating a questionnaire to understand freelancer/seller or client needs more effectively.  The study shows that there are multiple sellers in need of a feature that should allow them to add co-workers under their supervision to distribute the workload. Moreover, a weekly/monthly progress report is required by the client from the seller to identify whether the project is going on the right track or not. The platform should allow the seller to chat with their co-worker. Since many freelance platforms show only 3 states (In-completed, In-Progress, Delivered), clients want to know how much the project has been completed. This study will help us in powering our application more sustainably. | | | |
| Project Implementation Method |  | | | |
| Benefits of the Project | The purpose of this project is to create a platform that can benefit all Freelancers/Sellers and Clients.   * Seller can add members as an co-workers by inviting them through email. * Seller will be able to manage all projects which are in queue or process. * Seller will create a work breakdown structure of the project and assign tasks to co-workers according to their expertise. * Seller will be able to see the work progress of every co-worker. * Seller can chat with clients and with co-workers too. * Seller can show weekly/monthly progress reports to the client. * Seller can see the statistics of projects on the dashboard. * Seller will receive payment from the client. * Co-workers can see all assigned tasks to them and update the status after completion of the given task * Co-workers can show their progress reports to the seller. * Clients can see all listing of gigs by searching and category-wise. | | | |
| Technical Details of the Final Deliverables | The Project will contain both client and server-side programming. FreeGx will be built using MERN stack development. The frontend development will be implemented using React while the server-side Language would be Node JS (ExpressJs). MongoDB is a source-available cross-platform document-oriented database program, classified as a NoSQL, and will be used for the data storage of our project. The modules which will be using the MERN stack include   1. **GIGS LIFECYCLE:**   **Gigs Creation**: The seller can form his gigs by filling out forms. The form will contain all the information related to gigs. After completing all the required information, the gig will appear live for the client.  **Gigs Listings:** Top-rated Gigs will be shown to the client and can view details of any gig based on the project needs.   1. **CHAT:**   **Message Support:** The client will start communication with the seller. A proper talk will be held to give the overall project overview.  **File Sharing:** The client can share files so that the seller can analyze all the prospects of the project. There will be file sharing between the seller and the co-worker too.   1. **PROJECT PLACEMENT:**   **Project Assign:** The project will be assigned to the seller after appropriate discussion and will be delivered based on the signed contract.  **Project Status:** The client can view the completion status of his project. The percentage will be claimed based on the ratio of the number of tasks completed with the total number of tasks.  **Project Cancellation:** The client can abort the project within 24 hours. After that, there will be penalty charges based on how much the project has been completed.  Project Work Breakdown: The Seller will perform a work breakdown of the project and will assign tasks to the concerned co-workers.   1. **CLIENT EXCEPTIONAL FEATURES:**   **Search By Category:** The client can browse different categories based on his interest and the listing will be shown accordingly.  **Daily/Weekly Progress Report:** The seller will show a daily/weekly progress report of the project to the client.   1. **SELLER EXCEPTIONAL FEATURES:**   **Analytics:** A dashboard that shows Seller total earnings, pending projects, ratings etc.  **Billing:** This feature determines each project with the amount earned from that project   1. **CO-WORKER EXCEPTIONAL FEATURES:**   **Co-worker Registration:** The co-worker will register through the given invitation link from the seller  **Modify Task Status:** The Co-worker can change the status of any given task from  TO -> ONGOING -> COMPLETED  **Task Submission:** The Co-worker will submit the given task to the given global repository by the seller and change the status of the task. | | | |
| Final Deliverables of the Project | The final delivery of our system will be a service-based freelancing platform that will allow clients to browse categories and select any seller respective to his/her project needs. The client will send the technicalities of the project to the seller. After examination, the seller will divide the project into several components and assign these parts of the project to its co-workers.  **The modules of our Project are as follow:**   |  |  | | --- | --- | | * Landing Page * Gig Creation * Gig listings * Search By Categories * Assign the project to the seller * Ongoing Projects * Project Statistics * Seller Registration * Co-worker Invitation * Co-worker Registration | * Project Work Breakdown * Task distribution among co-workers * Chat * File Sharing * Billing * Seller Dashboard * Seller Earning * Active Co-workers * Task Submission * Client Review | | | | |
| Core Industry (Optional) | IT Service | | | |
| Other Industries (Optional0 | N/A | | | |
| Core Technology | 1. JavaScript 2. React JS, 3. Node JS, 4. Express JS, 5. MongoDB 6. PostgreSQL 7. Heroku 8. Selenium / Cypress | | | |
| Other Technologies (Optional) | N/A | | | |

References

1. Open Source Contribution, Getting Started-React; 2022 Meta Platforms, Inc. Available : ***https://reactjs.org/docs/getting-started.html***
2. How to Use MERN Stack: A Complete Guide; 2022 MongoDB, Inc.
3. expressjs.com contributors, API reference Guide using express; Strong Loop, IBM 2017.
4. Greg Lim, Beginning MERN Stack: Build and Deploy a Full Stack Development; Published : June 2021
5. Jira
6. Fiver

Project Key Milestones

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| Elapsed time in (days or weeks or month or quarter) since the start of the project | Milestone | Deliverables |
| Month 1 | Requirement Analysis and Feasibility Study | Project proposal and Presentation |
| Month 2 | Architecture design and Database Design | System Prototype and UML diagrams |
| Month 3 | Implement all the modules associated with the seller (Development Phase) | Seller Portal |
| Month 4 | Documentation | SRS / SDS |
| Month 5 | Implement all the modules associated with a client (Development Phase) | Client Portal |
| Month 6 | Implement all the modules associated with the client (Development Phase) | Co-worker Portal |
| Month 7 | Integration and dependent components | All implemented modules. |
| Month 8 | Testing and deploy | Deployed Product without any Error |

Project Equipment Details



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| **Item(s) Name** | **Type** | **No. of Units** | **Per Unit Cost (in Rs)** | **Total (in Rs)** |
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