

## **CERTIFICATE**

Certified that **Govind Gupta (2300290140065)**, **Harsh Sharma (2300290140069)**, **Kanchan Sagar (2300290140084)**, **Kartikey Raghuvanshi (2300290140086)** have carried out the project work **CrowdFund (Mini-Project-KCA353)** for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/ herself, and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

**Mr. Rabi Narayan Panda**  
**Associate Professor and Addl. HOD**  
**Department of Computer Applications**  
**KIET Group of Institutions, Ghaziabad**

**Dr. Arun Kumar Tripathi**  
**Dean CA**  
**Department of Computer Applications**  
**KIET Group of Institutions, Ghaziabad**

**Crowdfund**  
**Govind Gupta, Harsh Sharma, Kanchan Sagar, Kartikey Raghuvanshi**  
**ABSTRACT**

Crowdfunding has emerged as a revolutionary method for raising capital, allowing individuals and startups to gain financial support from a global audience. This project proposes the development of a decentralized crowdfunding platform utilizing Web3 and blockchain technology, enabling individuals to share their innovative ideas while attracting investors who can support these projects using cryptocurrency. The platform will be built with Solidity, a smart contract programming language, which ensures a secure, transparent, and automated environment for handling funds and agreements between project creators and investors.

The decentralized nature of the platform leverages the power of blockchain technology to eliminate intermediaries, thus reducing costs and increasing the trust factor. Every transaction will be recorded on the blockchain, providing real-time transparency and immutability, which is essential for maintaining investor confidence. The use of smart contracts will further automate the entire process—from initiating a project to collecting investments and distributing returns—based on predefined conditions agreed upon by both parties. This automation not only enhances security but also removes the potential for fraud or disputes.

The platform will primarily operate on a Web3 interface, providing a seamless and user-friendly experience for both project creators and investors. Users can connect their digital wallets to the platform to contribute cryptocurrencies such as Ethereum or other supported tokens. By integrating blockchain and Web3 technologies, the platform fosters a trustless environment where participants can engage without needing to rely on centralized authorities or third-party services.

This solution addresses the inefficiencies of traditional crowdfunding models by offering a decentralized, secure, and accessible platform for global participation. Through this innovation, we aim to empower individuals with promising ideas and investors seeking cutting-edge opportunities, thereby fostering an ecosystem of creativity and financial growth.

## **ACKNOWLEDGEMENTS**

Success in life is never attained single-handedly. My deepest gratitude goes to my project supervisor, **Mr. Rabi Narayan Panda** for his/ her guidance, help, and encouragement throughout my project work. Their enlightening ideas, comments, and suggestions.

Words are not enough to express my gratitude to Dr. Arun Kumar Tripathi, Professor and Head, Department of Computer Applications, for his insightful comments and administrative help on various occasions.

Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions.

Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me with moral support and other kind of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

**Govind Gupta**

**Harsh Sharma**

**Kanchan Sagar**

**Kartikey Raghuvanshi**

# TABLE OF CONTENTS

Certificate	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	v
List of Abbreviations	xii
List of Tables	xiii
List of Figures	ix
1 Introduction	1-3
1.1 Background	1
1.2 Need and Significance	1
1.3 Objective	2
1.4 Purpose	2
1.5 Intended User	2
1.6 Applicability	2
1.7 Components	2
1.8 Limitations	3
1.9 Feasibility Study	3
2 Problem Statement and Literature Review	4-6
2.1 Problem Statement	4
2.2 Literature Review	4
3 Problem Requirement and Analysis	7-9
3.1 Gantt Chart	7
3.2 Technology Required	8
3.2.1 Frontend Development	8
3.2.2 Backend Development (Blockchain)	9
3.3.3 Integration	9
4 System Design	10-14
4.1 Data Flow Diagram	10
4.2 Use Case Diagram	12
4.3 Class Diagram	14
5 Implementation and Coding	15-22
5.1 Coding Details	15
6 Software Testing	23-26
6.1 Testing Strategy	23
6.1.1 Smart Contract Testing	23
6.1.2 Security Audits	23

6.1.3	Documentation and Reporting	23
6.2	Test Cases and Outcomes	24
6.2.1	Test Case :	24
6.2.2	Test Case : Donate to Campaign	24
6.2.3	Test Case : Retrieve Campaign Details	24
6.2.4	Test Case :	25
6.2.5	Test Case : Donating Zero Ether	25
6.2.6	Test Case : Campaign Count	25
6.2.7	Test Case :	25
6.2.8	Test Case : Retrieve Campaign When None Exist	25
6.2.9	Test Case : Out-of-Bounds Campaign Access	25
7	Result and Discussion	27-30
7.1	Project Outcome	27
7.1.1	Enhanced Transparency and Trust	27
7.1.2	Direct peer-to-peer Transactions	27
7.1.3	Global Participation and Inclusion	27
7.1.4	Smart Contract Automation	27
7.1.5	Educational Impact	27
7.1.6	Community Building	27
7.1.7	Scalability and Future Expansion	27
7.2	Snapshot of Website	28
7.2.1	Home Page Before Wallet Connected	28
7.2.2	Home Page After Wallet Connected	28
7.2.3	Dashboard Page	29
7.2.4	Create Campaign Form	29
7.2.5	Adding Tier in Campaign	30
8	Conclusion	31
8.1	Conclusion	31
	References	

# LIST OF TABLES

<b>Table No.</b>	<b>Name of Table</b>	<b>Page</b>
2.1	Literature Review	5-6
3.1	Gantt chart	7-8
6.1	Smart contract testing	26
6.2	Frontend testing	26
6.3	Integration testing	26

# LIST OF FIGURES

<b>Figure No.</b>	<b>Name of Figure</b>	<b>Page No.</b>
4.1	DFD level-0	10
4.2	DFD level-1	11
4.3	DFD level-2 Campaign	11
4.4	DFD level-2 Dashboard	12
4.5	Use Case Diagram	13
1.6	Class Diagram	14
6.1	Remix IDE Prompt	24
6.2	Remix IDE Deploy and Run Portal	25
7.1	Home page before wallet connected	28
7.2	Home page after wallet connected	28
7.3	Dashboard page	29
7.4	Create Campaign form	29
7.5	Adding tier in campaign	30