

## A Blockchain-Based Freelance Coding Platform (Group 9)

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### **Value Proposition:**

This proposal aims to present a blockchain-based platform connecting freelance developers with hiring teams, allowing for transparency and quality assurance while eliminating discrepancies in the submitted quality of work, requirements, and compensation. The proposed platform will offer a more fair, competitive, and diverse talent pool, providing a central hub where demand and supply can meet.

The platform will offer several benefits, including transparency, fair trade, a competitive market, a diverse pool of talent, and a central hub where demand and supply can meet. Freelance developers can showcase their skills and bid on projects that match their expertise, while hiring teams will have access to a more diverse pool of talented developers. In addition, the platform will eliminate manual searching, saving both parties valuable time and effort.

### **Existing Alternatives:**

Current freelance platforms like Upwork, Freelancer, and Fiverr offer project posting, bidding, messaging, payment services, ratings, and dispute resolution features. However, their centralized nature leads to drawbacks, including lack of anonymity, potential bias, difficulty verifying previous works, and high fees ranging from 5% to 20%. Blockchain-based freelance platforms can address these issues by providing a decentralized, secure, and transparent solution. Decentralization reduces biases and increases trust, while blockchain records ensure the authenticity of previous work samples. Furthermore, blockchain technology facilitates secure, peer-to-peer transactions, potentially lowering fees by eliminating central authorities. In conclusion, blockchain-based platforms offer a promising alternative to traditional freelance platforms, providing enhanced security, transparency, and decentralized control, overcoming their inherent challenges.

### **Technical Overview:**

The proposed platform will be built on the Ethereum blockchain using proof of stake. The platform will have three primary roles: task/problem publisher, task/problem solver, and task/verifier. In addition, the following actions will be available to users:

- **Create a Task:** Hiring teams can create tasks for freelance developers to bid on. The task will clearly describe the problem, the required expertise, and the compensation offered.
- **Bid for Task:** Freelance developers can bid on tasks that match their expertise. They will provide a sample of their work and the compensation they are willing to accept.
- **Accept Bid:** Hiring teams will have the option to accept bids that match their requirements and budget.
- **Submit Solution:** Freelance developers will submit their solutions to the problem.  
**Accept Solution:** Hiring teams will have the option to accept the solution submitted by the freelance developer. If the hiring team agrees with the solution, the coins promised will be transferred immediately.
- **Reject Solution:** Hiring teams will have the option to reject a solution submitted by a freelance developer.
- **Escalate Decisions:** In case of a dispute, the platform will offer an escalation process for the hiring team and the freelance developer to resolve any disputes. The disputes will be resolved by a proof of stake-based consensus mechanism amongst task verifiers.

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The platform will also have other functions, including buying and selling, minting, transferring, and keeping coins in escrow until the work is completed.

### **Infrastructure:**

Successful implementation of the proposed platform relies on three key infrastructures. First, a robust and secure blockchain network must be established on the Ethereum blockchain to handle transactions, smart contracts, and consensus mechanisms. Second, a user-friendly and intuitive front-end interface must be developed to facilitate easy navigation and smooth access for freelance developers and hiring teams. Third, to ensure the quality of the dispute resolution mechanism, a strong task verification system should be implemented, which may involve recruiting and training a network of task verifiers who can effectively assess the submitted work. Fourth and last, secure and reliable storage solutions will be necessary for storing and accessing project data and maintaining a history of transactions and task completions. This infrastructure will also need a robust support system, such as customer support and regular platform maintenance and updates.

### **Solution Benefits:**

The most significant advantage of our solution is that it can ensure transparency and fair dealings, which erase the discrepancies between requirements and skills held, between quality expected and quality of work submitted, and between expected and actual compensation that often arise between hiring teams and freelance developers. As a result, a more competitive market is created, and our platform serves as a place to pool more qualified talent. This is an attractive advantage for the stakeholders associated with this platform.

### **Rooms for Improvement:**

The fact that the task verifier is different from the solver is one of the main differences with current players like freelancers, which play a critical role in ensuring the quality of work. However, with that added process, projects may take a little longer to complete than in the past at the cost of improved quality.

### **Future Development:**

As the platform grows and evolves, continuous development will be essential to ensure its success and adapt to the changing demands of the freelance market. Three prominent potential areas for further development are extending capabilities, introducing advanced features, and forming partnerships. Provided that the task verification can be efficiently adapted, the platform's capabilities can be extended to other industries beyond coding tasks, boosting the platform's Total Addressable Market (TAM). The introduction of advanced features, such as AI-based matching algorithms to improve the pairing of developers with suitable projects, can enhance the user experience and streamline the hiring process. Additionally, exploring partnerships with other blockchain projects or platforms can help expand the platform's reach and create new growth opportunities. Finally, ongoing investment in research and development to optimize the platform's performance, security, and scalability will be crucial to maintaining a competitive edge in the market.

The proposed blockchain-based freelance coding platform offers an innovative solution to the discrepancies between the submitted quality of work, requirements, and compensation. It will provide transparency, quality assurance, and fair trade. This is an innovative hiring process because it allows us to find candidates by checking their project track record stored in the blockchain, which would be more accurate than looking at resumes. This product could be expanded to other industries.

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**Project Code:** <https://github.com/rosaboyle/blockchainproject>