

# InstaRent

## Group 10 Project Proposal

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### **Group 10:**

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Web Science Systems Development  
ITWS-6800

Prof. Richard Plotka

# Web Science Systems Development Project Proposal

## The Team

The Group 10 team consists of a diverse group of experienced professionals with a strong technical and analytical skills. The team has substantial hands on experience with designing and the implementation of numerous real-world information systems. The team consist of:

**Mithun Nallu** (Technical Architect and Application Developer)

Mithun earned his Bachelor of Engineering degree in Computer Engineering from University of Mumbai. Later, he worked on many challenging projects as a Software Engineer with a US based company, Vistaar Systems Pvt. Ltd where he designed Pricing solutions mainly using Excel, OLAP analytics, Oracle database and other technologies, for multiple international clients.

**Nachiket Barve** (Application Developer) – Nachiket is an experienced software professional who has worked on projects for multiple clients. He has designed and implemented a number of real-world information dashboards which were used by several companies. Nachiket is currently pursuing his Master's in Information Technology and has a background in software design and development for web as well as mobile.

**Nitish Mishra** (Front-End Developer) -

Nitish is an experienced software engineer with two years of experience in Infosys Limited, India. He worked for a Fortune 100 client, implementing business logic for financial applications. He is currently pursuing a graduate program in IT from Rensselaer Polytechnic Institute. He is a proficient Java programmer.

**Peiliang Zou** (Back-End Developer)

Peiliang is pursuing her Master degree in Information Technology, concentration in Software Engineering and development. Peiliang has a solid background of economics and management from her undergraduate studies. Peiliang is fascinated by technology and is willing to solve real world problems using technical tools. From her previous studies and experience, Peiliang is a proficient user of C++ and various kinds of SQL based databases.

**Luying Wen**(Application Developer)

Luying is an experienced software engineer with a bachelor degree in Information Security. During her undergraduate years, she undertook academic and industrial projects . She interned at China Aeronautical Radio Electronics Research Institute as a software engineer, where she gained experience in software development life cycle.Currently she is pursuing her master degree at RPI in Information Technology. She is a proficient C++ programmer.

**Sicong Zhao** (Front-End Developer) - Sicong earned her Bachelor degree of Business in Electronic Business, China. Later, she began her further study in RPI and is currently pursuing her master's degree of Information Technology with a concentration in Software Design and Engineering. She had done several web application design projects in last semester and as she had a Business background she could help the development process in the view of clients' need.

**Taoran (Tom) Li** (UX Designer)

Tom has unique experience in Photoshop and Adobe Illustrator, because of which he suits the role and User Interface Designer best. As an UX designer, he will be responsible for creating/ collecting graphical elements front-end developers use to build the application. He will also be responsible for the whole User Interface design, to ensure the smoothness of user experience.

## The Project : “*InstaRent*”

**Summary –**

The purpose of this project is to design and build a seamless end-to-end rental management web application for tenants and landlords. The application will connect tenants with their landlords and help them do their monthly chores and vice-versa. The purpose or reasoning behind choice for this project is:

We want to take the tenant-landlord relationship to the next level by making their lives much more simpler. Renting has always been fragmented, unsecure and unnecessarily complex, even though it affects the lives of both tenants and landlords at some point of time. If you are a tenant,you no more have to send checks to your landlord or remember paying your rent on time. If you are a landlord, you directly get your rent deposited to your account, track all your tenants you have in multiple houses We want to eliminate all the hassles which are faced by both landlord and tenants and build a software which makes the whole rental process easy, intuitive and hassle-free.

### ***Technologies -***

We plan on using the following technologies

1. node.js in the back-end to process user requests and to generate content
2. For database we are going to use MongoDB with Mongoose.js as our Object Document Manager (ODM)
3. To make our application MVC standard compliant, we also plan to use bootstrap, Angular.js and to some extent jQuery
4. To support commenting feature in our application, we plan to use already ubiquitous Disqus commenting system

### ***Features-***

The primary features of our web application will be as follows:

1. Functionality for separate login accounts for tenants and landlords.
2. Two dashboards for landlords and tenants. Landlord dashboard will use Google Maps API to create a visual display of each of his house on rent.
3. Facility for tenant or landlord to invite each other to get connected on this web application. If the person being invited already has an account, the tenant and landlord will be linked. Otherwise, a new account will be created for the person being invited and then linked with the person who requested the invitation.
4. Facility for tenant to make a payment to the linked landlord. This will use Braintree API. Further, there would be an option for tenants (who are sharing an apartment) to split the rent such that if one tenant pays the landlord, the dues that the other tenants owe him is reflected in their accounts.
5. Complaints and communication between linked tenants and landlords: This will use Disqus API.
6. Account management: to facilitate adding, deleting and modifying accounts while maintaining consistency across other accounts in the application.