**Hedgewars Project**

**Project title**: Frontend updates

**Short description**:

**1) Basics**

1.1) Write a small introduction to yourself.

My name is Maya Agarwal. I am doing B.tech in Computer science. I am an Independent game developer. I love to play games as it encourage me to design more quality games.

1.2) State your preferred email address.

[bitsits2@gmail.com](mailto:bitsits2@gmail.com).

1.3) If you have chosen a nick for IRC and Hedgewars forums, what is it?

1.4) Why do you want to participate in Google Summer of Code?

Till now I have done many Independent projects, so I was looking for Industry level project and a chance to enhance my knowledge.

1.5) What are you studying, subject, level and school?

B.tech in Computer Science, 4th year, Bengal Institute of Technology (Techno India).

1.6) What country are you from, at what time are you most likely to be able to join IRC?

India. (IST 17:00) (UTC +05:30).

1.7) Do you have other commitments for the summer period? Do you plan to take any vacations? If yes, when.

No commitments or vacations.

**2) Experience**

2.1) What programs/software have you worked on before?

Here is the link to my blog where I post all my projects and prototypes. Web blog <http://bitsitsgames.blogspot.com>

The list of projects I was involved in the past are as below:

* Folder.exe (ongoing Academic Project)

A top down shooter game.

* Sign Line ( Team size - 2 )

The player will solve the puzzle of the game by joining same kind of symbols. The player can join the symbols either linearly or by making loops. More Points are given to the player for making loops. The game was made as an entry in [Imagine Cup](http://imaginecup.com/) Game Design Competition 2011 Round 1.

* [Cup A Cube](http://bitsitsgames.blogspot.com/2010/11/cup-cube.html)

In this game you have to collect sugar cubes to make your coffee sweet.

Reviews

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* [Atooms To Moolecule](http://bitsits.blogspot.com/2010/10/atooms-to-moolecule-trailer.html) (Team size - 2)

A chemistry based puzzle game. Explore the lab to see how Atooms changes into Moolecule.

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2nd best prize in [BITM](http://www.bitmcal.org/) Eastern India SEF.

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2.2) Have you developed software in a team environment before? (As opposed to hacking on something on your own)

Yes. I have worked on 4 team projects.

2.3) Have you participated to the Google Summer of Code before? As a mentor or a student? In what project? Were you successful? If not, why?

No. I have not participated in the Google Summer of Code before.

2.4) Are you already involved with any open source development projects? If yes, please describe the project and the scope of your involvement.

No.

2.5) Gaming experience - Are you a gamer?

Yes.

2.5.1) What type of gamer are you?

Intermediate.

2.5.2) What type of games?

Casual Games.

2.5.3) What type of opponents do you prefer?

Challenging.

2.5.4) Are you more interested in story or gameplay?

Story attract me and game play makes me addictive.

2.5.5) Have you played Hedgewars? If so, tell us roughly for how long and whether you lean towards single player or multiplayer.

Yes. Played it for 4 hours, multiplayer.

We do not plan to favor Hedgewars players as such, but some particular projects require a good feeling for the game which is hard to get without having played intensively.

**3) Communication skills**

3.1) Though most of our developers are not native English speakers, English is the project's working language. Describe your fluency level in written English.

Very Good

3.2) What spoken languages are you fluent in?

English, Hindi, Bengali.

3.3) Are you good at interacting with other players? Our developer community is friendly, but the player community can be a bit rough.

3.4) Do you give constructive advice?

3.5) Do you receive advice well?

3.6) Are you good at sorting useful criticisms from useless ones?

Yes.

3.7) How autonomous are you when developing? Would you rather discuss intensively changes and not start coding until you know what you want to do or would you rather code a proof of concept to "see how it turn out", taking the risk of having it thrown away if it doesn't match what the project want?

Discuss intensively changes and not start coding until I know what I want to do.

**4) Project**

4.1) Did you select a project from our list? If that is the case, what project did you select? What do you want to especially concentrate on?

Yes, Frontend Updates.

I want to concentrate on Graphical GUI and general refactoring.

4.2) If you have invented your own project, please describe the project and the scope.

4.3) Why did you choose this project?

I am quite familiar with game designing in PC and Windows Phone7. So I am comfortable with this project.

4.4) Include an estimated timeline for your work on the project. Don't forget to mention special things like "I booked holidays between A and B" and "I got an exam at ABC and won't be doing much then".

Before May 23 (Official coding time)

To familiarize myself completely with libraries and toolkits.

To do small programs using libraries and toolkits to adapt myself in new programming environment.

During this period I will remain in constant touch with my mentor. I will remain active on Mailing lists. Thus with the help of my mentor I will become absolutely clear about my future goals. I will also plan my schedule so that my project can be completed on time successfully.

May 23 – June 18 (Official coding period starts):

Understand the basic mechanism of the game.

Find ways to implement the required concepts.

June 18 – July 5:

Develop the UI for better usage and further implementation.

Testing the overall working of each and every module of the modified source code.

JULY 15: MID TERM EVALUATION

July 15 – July 29

Making further changes in the code to improve the Functionality, Exception handling, Bug Removal.

July 29 – August 5:

To be in constant touch with the mentor and to let them know about our progress.

Most of the time will be consumed for rigorous testing and bug fixes.

August 5 – August 12: For Documentation

August 26: Final Submission (A Buffer of two weeks has been kept for any unpredictable delay).

4.5) Include as much technical detail about your implementation as you can

4.6) What do you expect to gain from this project?

I would like to gain an experience in Industry level Project, which can help me to enhance my knowledge.

4.7) What would make you stay in the Hedgewars community after the conclusion of GSoC?

I have played the game and found it enjoyable, that will make me stay in the Hedgewars community.

**5) Practical considerations**

5.1) Are you familiar with any of the following tools or languages?

\* Mercurial (used for all commits)  
\* C++ (language used in the frontend)  
\* QT (crossplatform library for frontend)  
\* Freepascal (engine is written in pascal)  
\* SDL (wrapper for most of engine rendering)  
\* build environments (eg cmake/autotools/scons)  
\* Lua (missions and trainings are scripted)

I am familiar with C++ ad SDL.

5.2) Which tools do you normally use for development? Why do you use them?

API: XNA 3.1, 4.0. very easy to learn designing games.

Tools: Window Phone 7 development kit.

Graphics tool: Adobe Illustrator, Photoshop. It provide me vector art, Which can be modified very easily.

Video and sound Tool: Adobe Premier, WavePad, Window Movie Maker, Expression Encoder.

5.3) What programming languages are you fluent in?

C#, C++, C.

5.4) Would you mind talking with your mentor on telephone / internet phone? We would like to have a backup way for communications for the case that somehow emails and IRC do fail. If you are willing to do so, please do list a phone number (including international code) so that we are able to contact you. You should probably \*only\* add this number in the application for you submit to google since the info in the wiki is available in public. We will \*not\* make any use of your number unless some case of "there is no way to contact you" does arise!

Phone: +91-9038532642

**The Gambit Project**

**Project title**: Implementation of algorithms

**Short description**:

**About the project**

Which project from the [ideas list](http://www.gambit-project.org/doc/ideas.html) are you interested in working on?

Implementation of algorithms

Have you contacted one of the Gambit mentors (via gambit-mentors@nash.lse.ac.uk) to discuss your interest?

Not yet. I was not able to contact the mentors as the time of application is very short. But I will surely contact my mentor before the final coding starts to discuss about future goals and preparation.

Would you be willing and able to do other projects instead, and if so which ones?

Testing and performance comparison.

Give a rough timeline of intended milestone dates and objectives for your project.

Before May 23 (Official coding time)

To familiarize myself completely with libraries and toolkits.

To do small programs using libraries and toolkits to adapt myself in new programming environment.

During this period I will remain in constant touch with my mentor. I will remain active on Mailing lists. Thus with the help of my mentor I will become absolutely clear about my future goals. I will also plan my schedule so that my project can be completed on time successfully.

May 23 – June 18 (Official coding period starts):

Understand the basic Algorithm mechanism.

Find ways to implement the required algorithm.

June 18 – July 5:

Develop the feedback and its interaction.

Testing the overall working of each and every module of the modified source code.

JULY 15: MID TERM EVALUATION

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August 5 – August 12: For Documentation

August 26: Final Submission (A Buffer of two weeks has been kept for any unpredictable delay).

What languages, libraries, toolkits, and so forth do you propose to use for the project?

Languages: C#, C++, C, Java

API: XNA 3.1, XNA 4.0, Silverlight.

**Your background**

What school do you attend, what course/major are you taking, and what year are you in?

Bengal Institute of Technology (Techno India), B.tech in Computer Science, 4th year.

What is your background in mathematics, game theory, and/or other areas which are related to the project you're interested in?

In the first two year of my college, I have worked on Algorithms and Mathematics.

* Rank of [978 (213th in India)](https://www.spoj.pl/users/mya) during summer 2009, [SPOJ](https://www.spoj.pl/). SPOJ has 50000+ participants from 125 countries (800 from India) and 1200+ institutions.
* Maximum [TopCoder](http://www.topcoder.com/) Rating of [1328 (Blue member)](http://www.topcoder.com/tc?module=MemberProfile&cr=22770697) during summer 2009.

What is your background in computer programming/software engineering?

I have been designing games for more than 2 yrs.

The list of projects I have worked in the past are as below:

* Folder.exe (ongoing Academic Project)

A top down shooter game.

* Sign Line ( Team size - 2 )

The player will solve the puzzle of the game by joining same kind of symbols. The player can join the symbols either linearly or by making loops. More Points are given to the player for making loops. The game was made as an entry in [Imagine Cup](http://imaginecup.com/) Game Design Competition 2011 Round 1.

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What is your background with version control tools, especially distributed tools like git and/or mercurial?

Not familiar.

**Your summer plans**

Which city/country will you be spending this summer in?

India

How much time do you expect to have for this project per week?

6 to 10 hour per week as per required.

What is your personal timeline for the summer? Do you have any planned vacations or other commitments during which you would not be available to be working on the project?

I have not planned any vacation or commitments.

**Helsinki Institute for Information Technology**

**Contact Information**

Name: Maya Agarwal

Country: India

Home Country: India

School and degree: Bengal Institute of Technology (Techno India), B.tech

Email: [bitsits2@gmail.com](mailto:bitsits2@gmail.com)

Phone: +91-9038532642

Interested HIIT Project: Tablet-Based Game Interaction Techniques with Haptic Feedback

Which method of communication do you prefer? (i.e. in person, email, chat, video conference, etc.): email, chat.

**About You**

<Detailed description bout your education background, projects you’ve involved in the past and a link to your profile. >

I am in 4th year doing my B.tech in Computer Science from Bengal Institute of Technology.

Profile Link: <https://docs.google.com/leaf?id=0B0QVf9OFf6w5NTBjOTdkOTEtMmNhMy00MTcyLWFlMWItZDE1YzkyZTNkN2Q1&hl=en&authkey=CI__h7YK>

Here is the link to my blog where I post all my projects and prototypes. Web blog <http://bitsitsgames.blogspot.com>

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The Imagine Cup 2010 [Theme](http://imaginecup.com/CompetitionsContent/MDG.aspx): “Imagine a world where technology helps solve the toughest problems”.

<Why did you decide to participate in Google Summer of Code 2011>

Till now I have done many Independent projects, so I was looking for Industry level project and a chance to enhance my knowledge.

<Why did you select HIIT>

I am quite familiar with game designing in PC and Windows Phone7. So I am comfortable with the projects provided in HIIT idea list.

<have you reviewed the important dates and times of GSOC 2011? Do you have any significant conflicts with the GSOC 2011 schedule. Note that Google Summer of Code is a serious commitment>

Yes, I understand the work pressure involve in doing any work perfectly, so I prefer one work one time.

**Proposal**

<Give a detailed description of your project, major goals and the technologies you are planning to use>

I have developed a prototype for very basic game [Tetris](http://bitsitsgames.blogspot.com/2010/09/tetris.html) for PC. I want to implement all types of gestures to make UI smooth and perfect. Although Tetris is a very simple game but to implement it in Tablet-Based Game Interaction is quite challenging and interesting as it involve different kind of gestures.

Major Goals:

The major goal is to associate all kinds of gestures in a single basic game and to work on gestures perfectly rather than focusing on game play. Once the gestures are implemented perfectly it can be very helpful in the development of some major projects.

DRAG : To make a tile move left or right.

DOUBLE TAP: To rotate a tile:

TAP: To make it fall faster:

Other gestures can be implemented to enhance the feel of the game.

Programming Languages: C++, Java or C#.

Other Frameworks or API: XNA 3.1, 4.0, or OpenGL and SDL.

<Provide the project timeline and major milestones>

Before official coding time (23rd May)

To familiarize myself completely with Tablet-Based Game Interaction Techniques with Haptic Feedback.

Study of the Tablet-Based Game available in the market. Analyze the gestures and loopholes of the games to improve them in my project.

To do small programs to adapt myself in new programming environment.

During this period I will remain in constant touch with my mentor. I will remain active on Mailing lists. Thus with the help of my mentor I will become absolutely clear about my future goals. I will also plan my schedule so that my project can be completed on time successfully.

May 23 – June 18 (Official coding period starts):

Basic code to handle Heptic Feedback.

Code the game play in the required Language and API.

Integrate the Heptic feedback with the game.

June 18 – July 5:

Develop the feedback and its interaction with the game.

Develop the gameplay and enhance other aspects like graphics, HUD, Popups, etc.

Testing the overall working of each and every module of the modified source code.

JULY 15: MID TERM EVALUATION

July 15 – July 29:

Making further changes in the code to improve the Functionality, Exception handling, Bug Removal.

July 29 – August 5:

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**Atomic Blue**

**Project title**: Entities Behavior

**Short Description**: A.I can be made more realistic by adding some human kind behavior like if we are looking for something then normally when we get it we rush to have it. Similarly these small effects can be applied to our game entities. In case of combat A.I the enemy is expected to use some intelligent attacks rather than throwing random attacks. The combat A.I not only depends on the enemy how he swings his sword or uses his weapon but only on defending moves like jumping back to save it.

**Personal Details**

Name, Lastname: Maya Agarwal

Birth Date: 02-08-1988  
Country / City: India/Howrah  
Preferred Nick: mya  
Email (please provide more than one): [bitsits2@gmail.com](mailto:bitsits2@gmail.com), [bitsits@gmail.com](mailto:bitsits@gmail.com)  
Skype, Gtalk, MSN, AIM, Facebook, ICQ or other communication programs ID (please list all the ones applicable): bitsits2 (Gtalk), mya8802 (Facebook)  
Phone number: +91-9028532642

**Background**

What are you studying? At which year are you?: B.tech in Computer Science, 4th year.  
Have you participated in other development projects? If yes, please elaborate on the results and link relevant sites if applicable:

The list of projects and prototypes I have worked.

Here is the link to my blog where I post all my projects and prototypes. Web blog <http://bitsitsgames.blogspot.com>

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Since how many years are you programming in C++ ? : 3 years  
How will you rate your C++ knowledge? : Advanced  
Do you have any other scripting languages knowlege (ex.: PHP)? : No  
Do you have basic database knowledge and you know how to write a sql query for use with mysql? : Yes (Basic)  
Did you play PlaneShift before? Have you been involved with our community and for how much time? : Yes.

**Google Summer Of Code**

Describe any plans you have over the summer in addition to GSoC, such as classes, a summer job, vacation plans, master's thesis, etc. : No  
How much time you will realistically be able to dedicate to the project? : 6-10 hrs per day as required  
In which timezone you are and when during the day you will be able to work on the project?:

IST (UTC +05:30)

The main language in which you will interact with your mentor will be e­­nglish. Do you have a good read/write english skills?: Yes