**Hedgewars Project**

**Project title**: Frontend updates

**Short description**:

**1) Basics**

1.1) Write a small introduction to yourself.

I am Shubhajit Saha, pursuing my B.Tech from Bengal Engineering and Science University. Currently in 4t yr. I am a Independent Game Developer and have been developing games for about more than 2 years now.

1.2) State your preferred email address.

[bitsits@gmail.com](mailto:bitsits@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 been doing Independent projects, so I wanted to participate in some Industry level project to enhance my knowlwdge.

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

B.Tech, 4th year from Bengal Engineering and Science University

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?

The list of projects and prototypes I have worked.

Here is the link to my blog where I post my works. Web blog: <http://bitsits.blogspot.com/>

* **Sign Line** (Team size - 2)

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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 haven’t participated

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?

Moderate

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?

A good story with a good gameplay is like a cherry on top of ice-cream.

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 about 6 hours, I favor 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, Bengali and Hindi.

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?

I would 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.

**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?

The projects offered is compatible and familiar to the kind of works I have done previously. I am willing to work in an industry level 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 (Before the official coding time):

To familiarize myself completely with libraries and toolkits to be used.

To do self coding with the libraries and toolkits to understand it better. During this period I will remain in constant touch with my mentor and the community. I will remain active on IRC and Mailing lists to discuss and finalize on the modifications (if any) that needs to be on existing schemas and design of new schemas. Thus with the help of my mentor I will become absolutely clear about my future goals.

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 15:

Develop the UI for the 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 working in a industry level Project and more over contributing to it.

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

I have played the game and enjoyed it. I would like to contribute more toward the project.

**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++ and 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 and use).

Tools: Windows Phone 7 development kit.

Graphics Tool: Adobe Illustrator, Photoshop

Video and Sound Tool: Adobe Premier, WavePad, SoundBooth

5.3) What programming languages are you fluent in?

C# and 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: +91-9038532644

**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 application time was very short. But I will surely contact them before the final coding starts to discuss about the future goals.

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 (Before the official coding time):

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To do self coding with the libraries and toolkits to understand it better. During this period I will remain in constant touch with my mentor and the community. I will remain active on IRC and Mailing lists to discuss and finalize on the modifications (if any) that needs to be on existing schemas and design of new schemas. Thus with the help of my mentor I will become absolutely clear about my future goals.

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

Understand the basic Algorithm mechanism.

Find ways to implement the required algorithm.

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Develop the UI for the better usage and further implementation.

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

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

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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# or C/C++ or Java

API: Silverlight or XNA 3.1, 4.0

**Your background**

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

I am in Bengal Engineering and Science University, B.Tech, 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 practiced algorithms and mathematics programming.

I have been a member of [SPOJ](https://www.spoj.pl/), [TopCoder](http://www.topcoder.com/) and [ProjectEuler](http://projecteuler.net/).

* Rank of [192 (38th in India)](https://www.spoj.pl/users/my_zit) during summer 2009, [[SPOJ](https://www.spoj.pl/)](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 [1076 (Green member)](http://www.topcoder.com/tc?module=MemberProfile&cr=22764304) during summer 2009.

What is your background in computer programming/software engineering?

I have been designing games for more than 2 years.

The list of projects and prototypes I have worked.

Here is the link to my blog where I post my works. Web blog: <http://bitsits.blogspot.com/>

* **Sign Line** (Team size - 2)

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

No 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: Shubhajit Saha

Country: India

Home Country: India

School and degree: Bengal Engineering and Science University, B.Tech

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

Phone: +91-9038532644

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 and chat

**About You**

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

I am pursuing my 4th year B.Tech from Bengal Engineering and Science University.

Profile Link: <https://docs.google.com/leaf?id=0B5zZbcACEiJlNzA3NzI2ZTItNWQ3Zi00MzEyLTkwZTUtODMzMTdkNzU1NjUw&hl=en&authkey=CO-kiYwO>

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

Till now I have worked many independent projects and some team projects too. But in GSOC I will have a chance of working in a industry level project and enhance my knowledge.

<Why did you select HIIT>

The projects offered by HIIT idea list are compatible and familiar to the kind of works I have done previously. I am willing to work in an industry level project.

<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 have reviewed the dates carefully and understand the significance of the commitment. I have no other important works scheduled along with GSOC.

**Proposal**

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

I have developed a small prototype game [Squares Vs Triangles](http://bitsits.blogspot.com/2010/12/squares-vs-triangles.html) for PC and for Windows Phone 7. The game includes Tap and Drag for now but I would like to develop the game more, which will allow me to use many kind of gestures possible in a Tablet.

Goals: The major goal of my project is to encompass different Gestures for different action like DRAG to move the player, TAP to select the player, DOUBLE TAP to pause the game, PINCH and REVERSE PINCH to zoom out and zoom out of the level of the game. Other Gestures can be implemented too.

The gestures involved will make a different user experience and advanced UI.

Programming Languages: Java, C++ or C#

Other Frameworks/API: XNA 4.0, OpenGL or SDL

<Provide the project timeline and major milestones>

Before May 23 (Before the official coding time):

To familiarize myself completely with OpenGL, Haptic Technology, Haptic Feedback and Haptick Library.

To do self coding with Haptick Library to improve my understanding and ease of use with other Game Libraries. During this period I will remain in constant touch with my mentor and the community. I will remain active on IRC and Mailing lists to discuss and finalize on the modifications (if any) that needs to be on existing schemas and design of new schemas. Thus with the help of my mentor I will become absolutely clear about my future goals.

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

Basic Code to handle Haptic Feedbacks.

Code the Game play in the reqired language and API.

Integrate the Haptic Feedbacks with the game.

June 18 – July 15:

Develop the Feedbacks and its interaction in the game.

Develop the gameplay and enhance the HUD, Graphics, popups and other aspects.

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).

**Atomic Blue**

**Project title:** Entities Behavior

**Short description:** The computer controlled is the heart of the game which must be made real like to enhance the feel of the game. The AI of the enemies must vary from start of the course to the ending. The combat and maneuvering techniques must be made highly agile and intense. The combat AI must be very accurate to defend itself and attack as per requirement of the game mode or level or the reaction time of the player.

**Personal Details**

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**Background**

What are you studying? At which year are you?: I am currently pursuing B.Tech, 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 my works. Web blog: <http://bitsits.blogspot.com/>

* **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.

* [Treasure Island](http://bitsits.blogspot.com/2010/12/treasure-island.html)

A 48 hr game made for [Ludum Dare #19 competition](http://www.ludumdare.com/compo/).

*Reviews*

[Top Entries - Overall](http://www.ludumdare.com/compo/ludum-dare-19/?action=top&cat=Overall&more=1) , [COMPO GAMES (242)](http://www.ludumdare.com/compo/ludum-dare-19/?action=preview&etype=compo), [Ludum Dare #19 competition](http://www.ludumdare.com/compo/).

[Drawing Roundup](http://experimentalgameplay.com/blog/2010/12/drawing-roundup/), [Experimental Gameplay Project](http://experimentalgameplay.com/).

* [Squares Vs Triangles](http://bitsits.blogspot.com/2010/12/squares-vs-triangles.html)

A RTS game inspired from [Jon klassen](http://www.burstofbeaden.com/)'s art [squarestrianglesatsea.jpg](http://www.burstofbeaden.com/squarestrianglesatsea.jpg) and [shapewarsweb2.jpg](http://www.burstofbeaden.com/shapewarsweb2.jpg).

*Reviews*

First in OpenSoft [Kshitij](http://www.ktj.in/) 2011 (IIT Kharagpur Techfest).

[Night & Day Roundup](http://experimentalgameplay.com/blog/2010/12/night-day-roundup/), [Experimental Gameplay Project](http://experimentalgameplay.com/).

Third in GameX (Game Design Competition), [Tryst](http://tryst2011.com/) 2011 (IIT Delhi Techfest).

* [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.

*Reviews*

First in Envision, Ingenuity (Open Software Design), [Troika](http://www.troika.dcetech.com/) 2011 DTU (IEEE Student Branch).

First in GameX (Game Design Competition), [Tryst](http://tryst2011.com/) 2011 (IIT Delhi Techfest).

[BIT](http://www.bitcollege.org/) (Techno India) [Bits2Bytes](http://www.bits2pulse.com/b2b) ’10, 1st in Software Designing.

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

Second in AppsDreamer [Synapse](http://synapse.daiict.ac.in/) 2011 (DAIICT, Gandhinagar).

* [Moolecule](http://bitsits.blogspot.com/2010/07/moolecule.html)

Connect the atomic creatures to make bigger and bigger molecule.

*Reviews*

[Best of the Net: Casual Addiction](http://experimentalgameplay.com/blog/2010/07/best-of-the-net-casual-addiction/), [Experimental Gameplay Project](http://experimentalgameplay.com/).

["Molecular world (updated Chinese Version)" (moolecule) [archive]](http://www.verycd.com/topics/2846391/), [VeryCD](http://www.verycd.com/).

* [Apple e Apple](http://bitsits.blogspot.com/2010/06/apple-e-apple.html)

In the game you have to grow an apple tree and lots of apples before you collect all the arrows.

*Reviews*

[Best of the Net: Casual Addiction](http://experimentalgameplay.com/blog/2010/07/best-of-the-net-casual-addiction/), [Experimental Gameplay Project](http://experimentalgameplay.com/).

["Apples" (Apple e apple) [archive]](http://www.verycd.com/topics/2841690/), [VeryCD](http://www.verycd.com/).

* [Speedy Crash](http://bitsits.blogspot.com/2010/05/speedy-crash.html)

You are trapped in an endless asteroid belt, where you crash into them using your velocity. An [Experimental Gameplay Projects](http://experimentalgameplay.com/). This game was developed for The May theme [May means HIGH VELOCITY](http://experimentalgameplay.com/blog/2010/05/may-means-high-velocity/).

*Reviews*

[High Velocity Roundup](http://experimentalgameplay.com/blog/2010/05/high-velocity-roundup/), [Experimental Gameplay Project](http://experimentalgameplay.com/).

* [Push Puzzle](http://bitsits.blogspot.com/2010/04/push-puzzle.html)

An [Experimental Gameplay Projects](http://experimentalgameplay.com/). This game was developed for The April theme [Wash, Rinse, and REPEAT](http://experimentalgameplay.com/blog/2010/04/in-april-wash-rinse-and-repeat/).

*Reviews*  
[Best of the Net: Repeat](http://experimentalgameplay.com/blog/2010/04/best-of-the-net-repeat/), [Experimental Gameplay Project](http://experimentalgameplay.com/).  
[Experimental Games Project - April - Repeat](http://www.gamerswithjobs.com/node/50186), [Gamers with Jobs](http://www.gamerswithjobs.com/).

* [Gombli](http://bitsits.blogspot.com/2010/03/gombli.html) (Team size - 2)

The game was made as an entry in [Imagine Cup](http://imaginecup.com/) Game Design Competition 2010 Round 1. The Imagine Cup 2010 [Theme](http://imaginecup.com/CompetitionsContent/MDG.aspx): “Imagine a world where technology helps solve the toughest problems”.

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 to 10 hour 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.