#### *Simple Certificate Management System*

# Contact Info:

Email: [alamincse32@gmail.com](mailto:alamincse32@gmail.com)

Skype: alamincse32

Facebook: https://www.facebook.com/profile.php?id=100002147128401

I am always available in skype.

2. Web page: Sorry, I don’t have.

3. Academic Background:

I am a student of Bangladesh University of Engineering and Technology (BUET). Currently studying on 3rd year in computer science major. The following programming related courses that I have finished successfully:

* **Fundamentals of Computer**
* **Python lab**
* **C: theory and lab**
* **Object Oriented Programming with C++ and Java: Theory and lab**
* **Data Structure: Theory and lab**
* **Algorithm Designs: Theory and lab**
* **Programming with Assembly Language: Lab**

4. Benefit for jBoss Community: I have chosen “Simple Certificate Management System” as my Gsoc 2014 project. If jBoss community accept my proposal for this project then it will be good for them and also for me, because at the end of the time I will provide a **working, successful and efficient** Certificate Management System. I have knowledge about CA(certificate authority) who have responsibility to verify the identity of entity or customer who request for a digital certificate. If entity is verified then CA will issue a certificate to the entity who requested. This digital certificate is used for encryption so that receiving point can authenticate the sender. CA maintains a certificate revocation list of digital certificate which are no longer valid. In our project we need to implement CRUD operations for certificates. Certificate Management System that we will build is for PicketLink, PicketLink is a security framework for java EE and it also secure beans, bean method, view layer, servlets and etc. It also manages the identity of Users, groups, roles and many more. PicketLink has built in support for storing identities in FileSystem, in Relational Database and LDAP. For any type of cryptography operation we need to use Bouncy Castle cryptographic API or Library. I have basic knowledge of github, how to install, create user and clone, commit, pull, push etc in github. We need to also use public key infrastructure standard(PKI) X.509. Last of all I have good knowledge in Java Language. So if my proposal will accept then I will perfectly end this project and will learn many things from mentor and jBoss community.

5. Task Outline: I will break the whole project into following pieces.

* 1. Study about PicketLink and gather deep knowledge about it and also for X.509 certificate.
  2. Requirement analysis with the help of mentor.
  3. Drawing the use case diagram, class diagram and sequence diagram.
  4. UI creation for certificate management system.
  5. Implementation of CRUD operation for certificate.
  6. Maintain a certificate revocation list.
  7. Finalize the code(refactoring, modifying etc) and review the code from mentor.
  8. Test project using unit testing.

N.B: Task outline may be changed because it depends on the requirement analysis.

# 6. Milestones:

As we have time from May to August 18, almost 13 weeks. Every week I can effort 30 to 40 hours for this project. So, I think every week I will keep delivering or updating project to project mentors. Below the milestone is given…

* + Week 1: (5.a) Study about PicketLink and gather deep knowledge about it and also for X.509 certificate.
  + Week 2: (5.b) Requirement analysis with the help of mentor.
  + Week 3-4: (5.c ) Drawing the use case diagram, class diagram and sequence diagram.
  + Week 5-6: (5.d) UI creation for certificate management system.
  + Week 7-9: (5.e ) Implementation of CRUD operation for certificate.
  + Week 10: (5.f) Maintain a certificate revocation list.
  + Week 11: (5.g) Finalize the code(refactoring, modifying etc) and review the code from mentor.
  + Week 12: (5.h) Test project using unit testing.
  + Week 13: Backup time
  1. Involvement with open source: As a user I have involvement with open source software like ubuntu, eclipse, netbeans etc.

# Other time commitments:

**School:** I have two weekends in a week and every day class is finished by 1:00 PM or 5.00PM, it depends on class routine.

**Work:**  I don’t do any professional work.

**Vacation:** In the month of June, the vacation will be for 15 days. So in that time I can do project as a full time job.

* 1. Plan to showcase: At the end of the GSOC program I will try my best to deliver a standard “Simple Certificate management system” for PicketLink and also give user friendly environment, no complexity, organized steps and nice visibility to user.