Systers GSoC Project Proposal

Conference App

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Abstract

This project is a mobile application for Grace Hopper Celebration conference which supports Android, iOS and Windows platforms. Currently there isn't an application for the conference, so the attendees can not see detailed information about the conference with their mobile phones instead of the website. Its main elements are a login screen which supports all well-known social providers, a main screen which shows information about conference info, speakers, surveys and attendees, schedule, custom user schedule, map and profile screens.

This project will be most beneficial for attendees to keep track of the conference news and attendee status. Work will proceed in weekly iterations, with bug fixes and features as deliverables.

Project Goals

- Integration with Google Maps and Etouches API
- Improving the app's general UI/UX by making optimized for tablets and design parts of the app by following material guidelines
- Authenticating users using social logins
- Collecting analytics data
- Support for offline data
- Detailed view of speakers, schedule and surveys
- Allowing users to create their own schedule

2. How can we reach you (email, GTalk, Slack etc.) ?
E-mail: yasinsinan707@gmail.com
Slack: @yasinsinankayacan
3. What is your github username(s)?
Github: https://github.com/krialix

Timeline

4a. What do you plan to accomplish over this summer for this project?
I will be devoting around 30-35 hours per week to the project. Apart from this, I will write weekly blog posts that shows the development progress of the project, and encourage developers to contribute to open source projects. I do not have any other summer internship or job so I will be able to spend my full time on the project. Below is a proposed schedule for accomplishing some important milestones.

Time Frame	Start Date	End Date	Task
Community Bonding	**May 4**	**May 29**	
	May 30	Jun 4	Break for Final Exams.
	June 5	June 8	Login screen implementation.
	June 9	June 15	Etouches API implementation for data module.
	June 16	June 28	Home screen implementation which includes info, speakers, surveys and attendees subscreens.
Blog Posts			**2 blog posts on Starting my Journey for GSoC 2017 and designing a conference app following material guidelines.**
Phase 1 Evaluation	**June 26**	**June 30**	
	June 30	July 3	Schedule screen implementation.
	July 4	July 5	Break for University Graduation Ceremony.
	July 6	July 13	Schedule screen implementation.
	July 14	Jul 26	Custom user schedule screen implementation.
Blog Posts	Jul 26	Jul 28	**1 blog post on schedule screen implementation.**
Phase 2 Evaluation	**Jul 26**	**Jul 28**	
	Jul 29	Aug 10	Map screen implementation.
	Aug 11	Aug 14	Profile screen implementation.
	Aug 15	Aug 18	Through Testing, Exception Handling and final .apk file.
	Aug 19	Aug 20	Preparing documentation.
Blog Posts	Aug 21	Aug 21	**2 blog posts on open source libraries used in application.**

Implementation

5b. Include wireframes of the new applications. Which prototyping tool did you choose? Include notes of each element (i.e. accordion menu, bottom navigation, etc.) and why you chose that method/icon.

Mockup

I made an initial design for the app with Sketch. My main priority was designing an extensible design which can be improved by different use cases.

ANITA BORG INSTITUTE

Figure 1

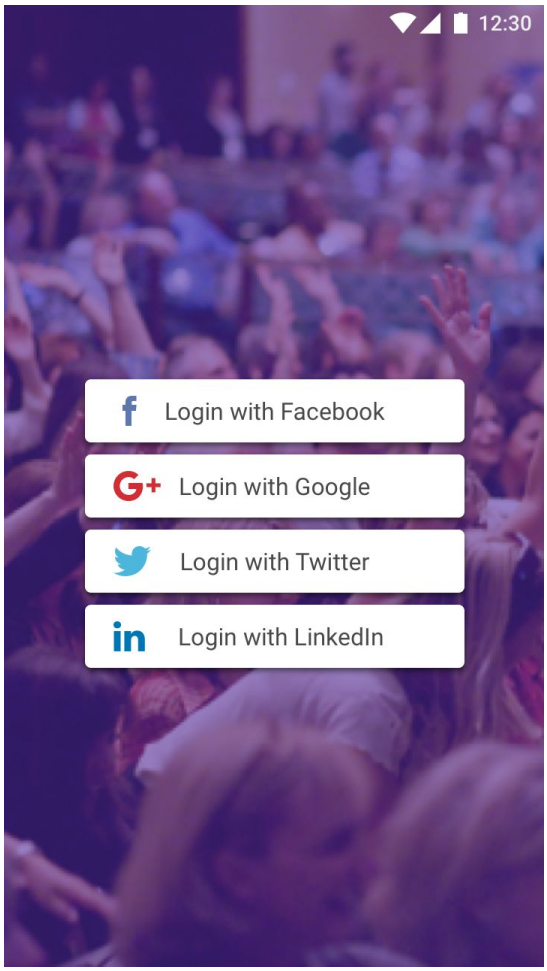


Figure 2

In Figure 1, I created an onboarding screen which shows only the institute name. It will be shown as first screen when user clicked the app icon.

In Figure 2, login screen will be shown to the user. As an initial mockup, limited number of social providers are available to user.

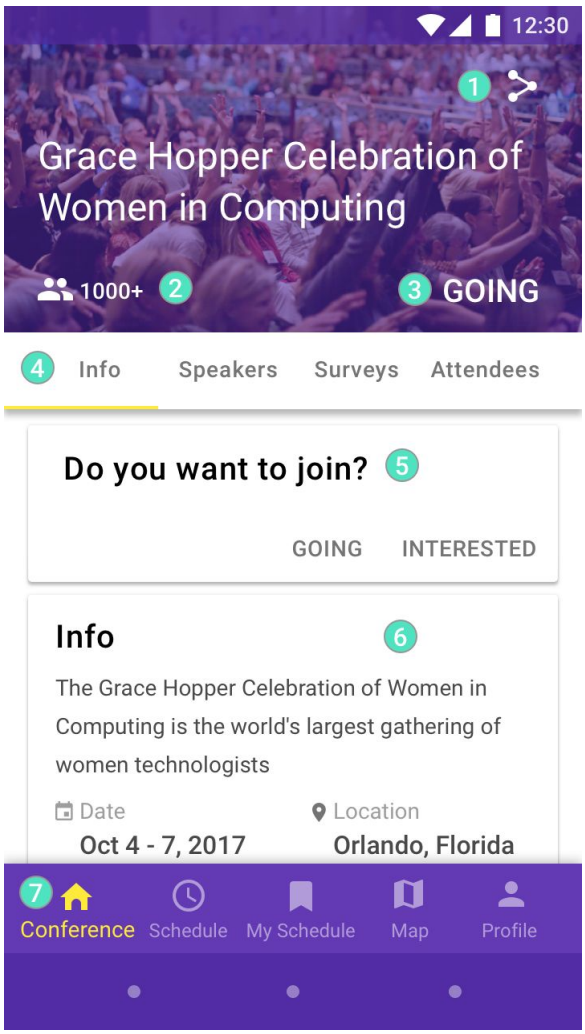


Figure 3

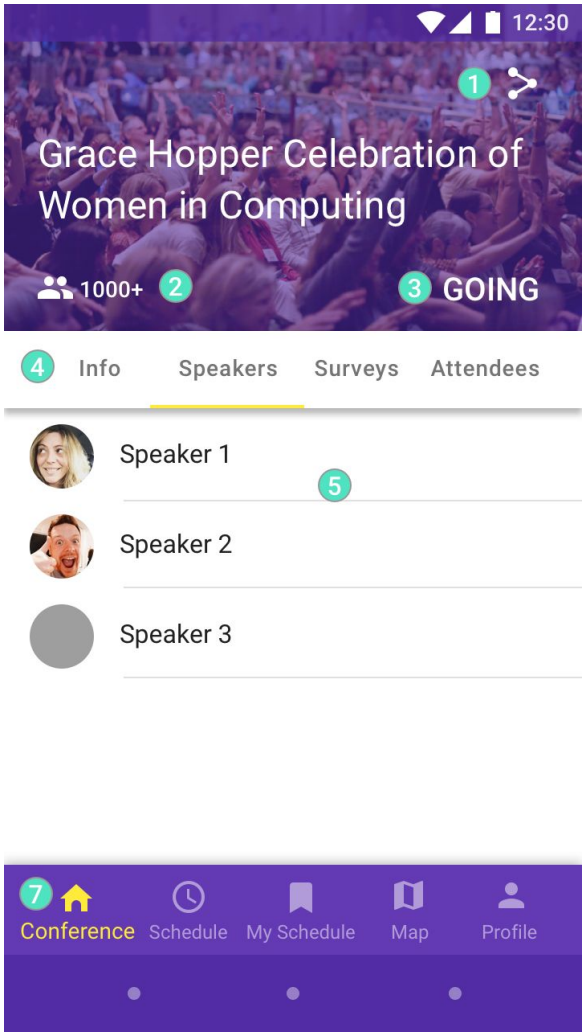


Figure 4

In Figure 3, the user will see the general info about the conference after logged in successfully. I have added a BottomBar(7) to make in app navigation easier. Also, it is a recommended design pattern in both Android Material Guidelines and iOS Guidelines. I thought that, sharing conference in social media(1) is good thing to notify friends of the user and to reach the large masses. In addition, conference screen will show about general conference info such as participation status(3) and number of attendees(2).

In Figure 4, when the screen is swiped from right to left, speakers section will be shown to the user. If user clicks one of the speakers, speaker detail screen will be opened and will be shown general info about the speaker.

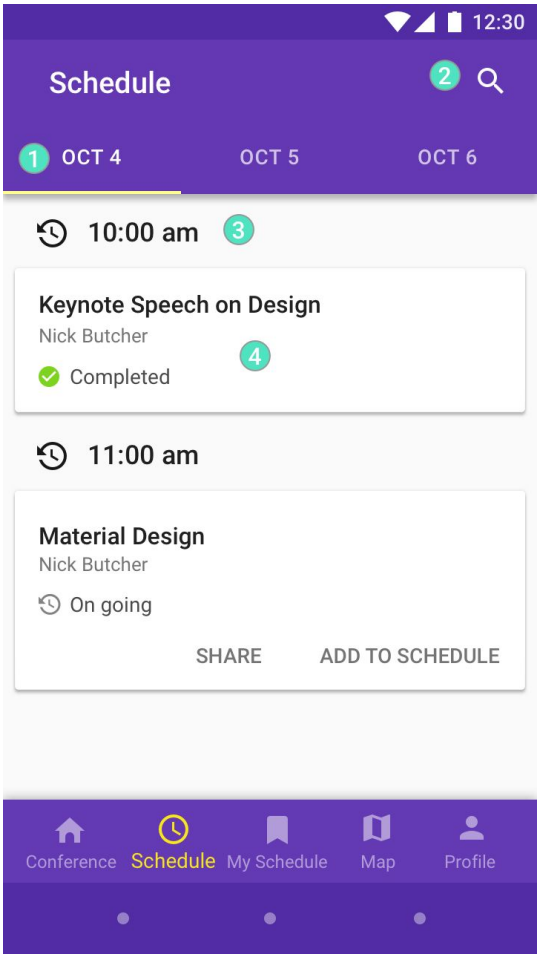


Figure 5

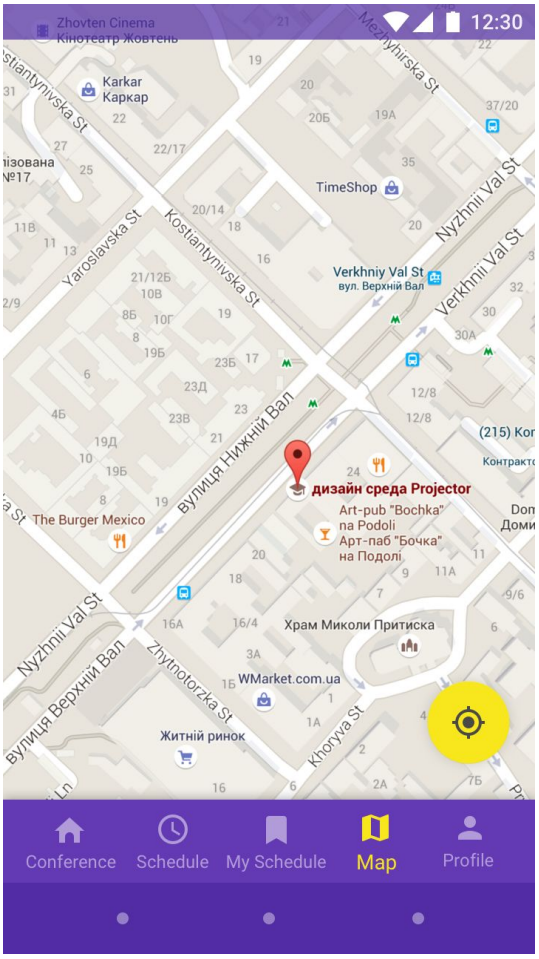


Figure 6

In Figure 5, I thought that schedule screen must be simple and informative about session. In the screen, each session is designed as a card and each card contains information about name of the session, name of the speaker and session status. Moreover, the user should share the session information like conference info in Figure 3. There are two extras for the user to improve usage. One of them is search icon in toolbar(2), and the other one is Add To Schedule button in session card. Session card action buttons are only visible unless session time isn't expired.

In Figure 6, the user can use the map to navigate easily in conference.

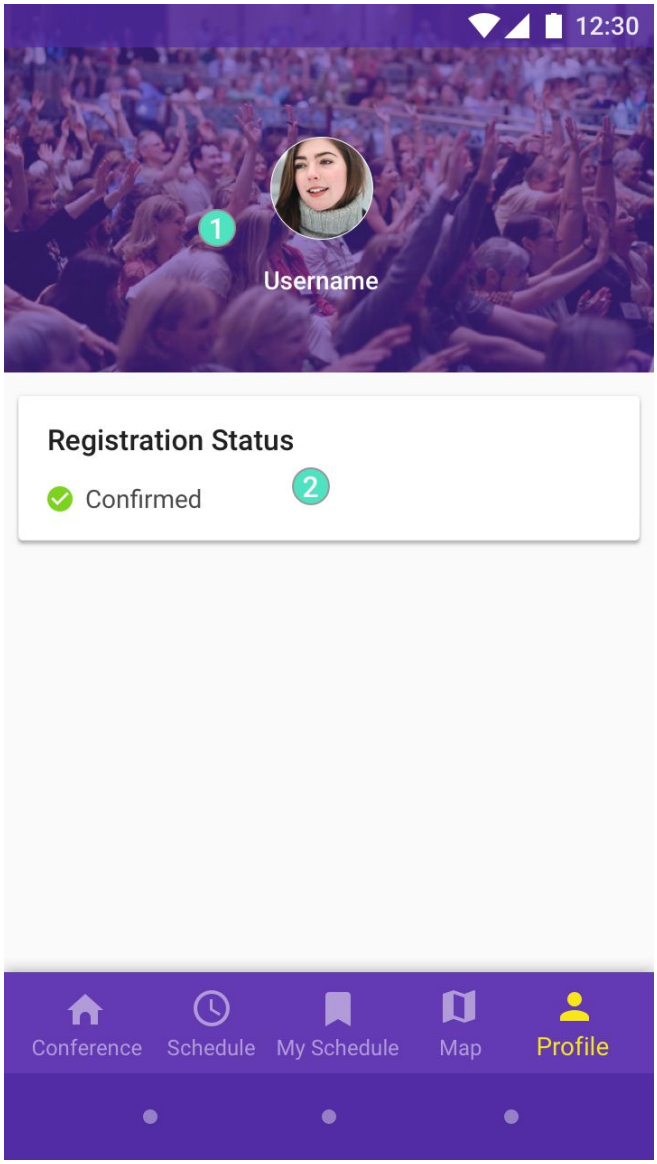
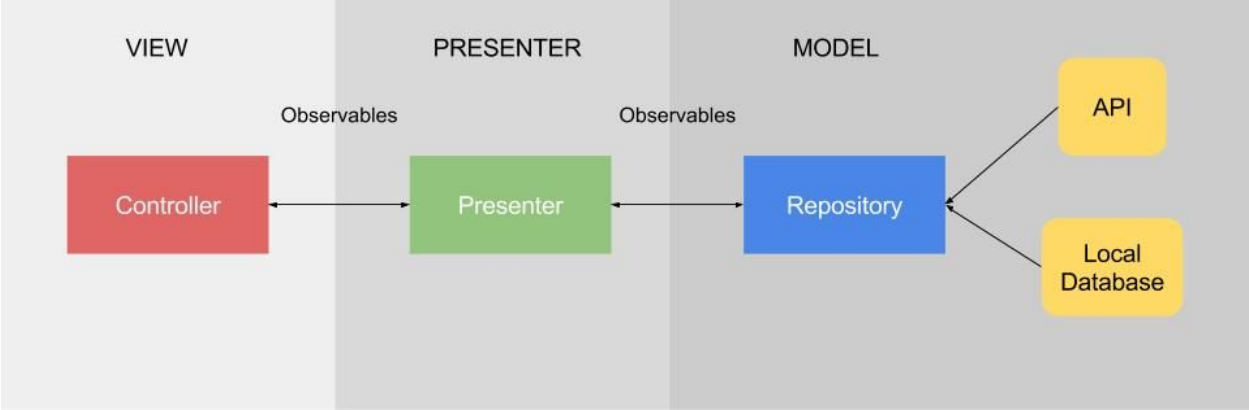


Figure 7

In Figure 7, a basic user profile will be shown to the user. It is currently doesn't contain much information but it can be improved.

Architecture

The general architecture of the application is given below.



Development

To make the app build simple for other developers, I will be providing a good documentation. The app will use other well-known open source libraries to speed up development. Currently, the following list of libraries will be used in the application, but it can change depending on development process.

- https://github.com/bluelinelabs/Conductor/
- https://github.com/JakeWharton/timber
- https://github.com/square/leakcanary
- https://github.com/ReactiveX/RxJava
- https://github.com/JakeWharton/butterknife
- https://github.com/evernote/android-job
- https://github.com/square/retrofit
- https://github.com/square/okhttp
- https://github.com/square/moshi
- https://github.com/realm/realm-java

I will follow Square Code Style in the application. The application will use Conductor library as a replacement of Fragments. (Advocating Against Android Fragments)

Project Specific Questions

5c. For new apps, what do you believe are the minimum features required? Why? For established apps, what areas do you believe can be improved? How?

I think minimum required features for new apps depends on use cases of the application, and qualification of development team.

Use cases vary across context of the project. If project requires user authentication, social login providers must be added. In addition, UI/UX is one of the most important thing for user point of view. For complex apps, user must be educated before dive into the application, so educational onboarding is required with in-app educational showcases. Moreover, analytic and crash report tools are required to track user behaviors, crash reports. They will lead to better development of the application.

Qualification of the development team is another factor affects minimum feature requirements. If team is qualified enough, app must be tested before each release version. The app must be divided into modules that developers can work on each module individually and with usage of branch system in Git, feature implementation will be hassle-free.
For established apps, written code must be reviewed, memory leaks and code smell must be tested with analyzing tools such as PMD, checkstyle, LeakCanary etc. In addition, user reviews must be considered to improve user flow.

11. What kind of experience do you have with Android, iOS, or Windows Phone development? Do you have any design or UI experience? Describe in detail. Include any links to previous work/projects.
I am an intermediate enthusiastic Android developer, with three years of experience and I have adequate experience with Java.

I gave basic and advanced Android lessons in my university as a side work.

I generally use MVP pattern with some Clean Architecture inspirations for medium and large scaled applications.

My activities with Android can be listed as;

- Developed an Android MVP library using Loaders.
- Created some test apps to test Android Data Binding feature with MVVM pattern.
- Switched to RxJava to follow Reactive approach.
- Developed medium and large scaled apps with my friends.

Apps that I am involved in can be listed as;

- Messenger for Interpals: Unofficial chatting application for the InterPals Penpals website.
- Wress: Wress is an app which provides static location and weather info to users.
- Backpackers: Backpackers is a challenge based platform where all travelers can ask questions and give answers. (It is a test app for Yoloo)
- Yoloo (in development): Yoloo is a social portal which allows travelers ask questions such as accommodation, transportation, currency, food, budget, and places to visit. In addition, travelers can comment on questions, thus, they can share experiences.

I mainly use Sketch to draw mockups and design. In addition, I follow Material Design Guidelines.

12. Have you had any experience with accessibility design? How do you develop/design applications to be inclusive for people with disabilities?
I haven't experience with accessibility design. However, if I should design an app for people with disabilities, I do research about these disabilities and make test mockups before developing app.

General Development and Education Questions

General Development

17. Why do you think you are a good candidate for this project? Describe the skills you confidently bring to the project, what you hope to learn from working on this project, and your interest in the Systers mission.
I believe that I am a good candidate for this project because of my extensive knowledge of Android development and my ability to adapt to any situation. I have a passion for open-source projects that would push me to help people and projects. Also, with my personable character I can work well and communicate with others to contribute to team efforts. Hence, this project allows me to a part of a bigger community.

18. We have various projects in Python, Ruby, Android, iOS and Ushahidi. Describe the *largest* project you have completed in any of the programming languages mentioned. (Include # of members, time zones, etc.) If you haven't used any of the programming languages, describe the programming experience you have that will allow you to learn a programming language quickly and be successful on this project.
My largest project is Yoloo which I described in before. We have two members in this project. My friend and me are both developer, designer and co-founder of our startup. We are from same school, so we have not time zone difference.

19. We use GitHub for our projects. Do you have experience with any version control software? Please describe the experience and list the different softwares.
I use GitHub in my projects extensively and I am also proficient at Git commands.

20. Describe any commitments you have over the time period of GSOC (including the community bonding period), such as classes, a summer job, vacation plans, final exams, master's thesis, etc.
My dates which I will not be available is listed below:

- May 30 - June 4 - My final exams
- July 4 - July 5 - University graduation ceremony

Education

What year are you in school?
4th year

What programming courses have you taken? What did you like about them? What did you not like?

- SE 115 - Introduction to Programming 1 (C)
- SE 116 - Introduction to Programming 2 (C++)
- CE 221 - Data Structures and Algorithms 1
- CE 223 - Database Systems
- SE 309 - Concepts of Programming Languages
- SE 362 - Server-Side Scripting Languages (PHP)
- SE 480 - Client-Side Scripting Languages (JavaScript)
- SE 311 - Software Architecture
- SE 370 - Programming Web Services (Server side JAVA)
- CE 306 - Computer Networks and Communication
- CE 303 - Operating Systems

I liked all the programming courses I've taken because they improved my thinking skills and problem solving ability. However, they are not enough in terms of content. Programming languages and tools are improving constantly and the courses I've taken are not up-to-date.

What is your major? Why have you chosen that?
Software Engineering. It is my dream job since my childhood. I really like develop programs and be happy when the program is beneficial to people.

Have you done group projects (programming or otherwise)? What was your primary contribution/role in the group? What made working in a group better than alone? What made it harder?
I took part in many group projects. My contribution to the projects are listed below:

- MasterHope (SE 480 Course Project): Developer and documenter
- Enabling Flexible and Diverse Interpreting Practice in Virtual Worlds: The ÇEV-VİR Project: Backend PHP developer
- Messenger for Interpals: Android developer
- Wress: Android developer, Product developer
- Backpackers: Android developer, Product developer
- Yoloo: Android developer, Product developer

I think, working in a group is beneficial for self-development and team communication. Working alone is good for developing small tools. However, when the product needs grows,

manageability of the product becomes harder. On the other hand, sometimes group communication may be problem but it can be handled by tools like Slack and GitHub.

22. Do you have professional work experience in programming? Tell us about it.
I've done my internship at Cemametrix Company which is located in 9 Eylül University Technology Development Area. My responsibility was developing a Node.js application which connects company developers to Google Calendar and automatically manages their meeting times. I can not link source code because of NDA.

23. Do you have previous open source experience? (Not including the work mentioned about Systers' projects contributions.) Tell us what you have done. (i.e. Hacktoberfest, etc.)
I am a member of XDA community. I was interested in Android Linux Kernel and created my own version and contributed to original kernel owner for mako devices in my 1st year of university.

24. What would your dream job be if money was not a factor? (i.e. bookstore owner, dog walker, professional cupcake taster etc.)
Software engineering

About Me

I am a Senior Undergraduate Software Engineering student who is studying at Izmir University of Economics. I am a mobile developer, for 3 years. Moreover, I involved in many projects, tech startups, and also I have my own startup. I am also a passionate entrepreneur and a fellow in Endeavour Turkey. I am very familiar with mobile technologies, frameworks and I have a desire following new trends. In addition, I am comfortable with teamwork, and I have adequate experience with distributed development. I attend to conferences, seminars about programming regularly. I was one of the organizators of Global Game Jam in 2015. I was also the leader of Software Engineering Club in my university for 2 years. I have completed AIESEC Global Citizen program in Moldova.

Time Zone
UTC+03:00

University Information

University: Izmir University of Economics
Major: Software Engineering
Current year and Graduation Date: 4th year, 2017
Degree: BSc