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Indic Keyboard

**Google Summer of Code 2016**

# About Me

I currently in the 4th year of my Bachelors in Technology Degree from Delhi Technological University (formerly DCE) in Electronics and Electrical Engineering. I have been tinkering with code since school days. I love working on Android Apps, as well as the Android OS (AOSP), and have spent many of my nights up hacking on electronics projects. I also regularly participate in a lot of hackathons and have won a few of them in the Delhi circuit. As an open source Android evangelist, I have spoken at ***MODS*** 2014, and at ***DroidCon*** India 2013, 2014 and 2015, on topics such as - “Modifying and Enhancing the Android OS” and “Continuous Integration of Android OS Projects”.

I was a participant at Google Summer of Code 2015 under the organisation FOSSASIA, working on the Open Event Webapp project.

# Overview

I want to work on smc’s Indic Keyboard project. I want to work on both the proposed ideas - ‘improving onboarding experience’, as well as ‘creating SDK for indic keyboard’.

I was on the Editorial Panel at DroidCon 2015, and saw my prospective mentor, Jishnu give a brilliant presentation on SMC and Indic Project’s works like libindic and Indic Keyboard. I have myself often felt the lack of support of indic language when building app for Indian market, and would love to be able to work on turning the Indic Keyboard into an SDK, so that app developers can easily insert Indian Language Input support in their apps. .

# Work Experience

* Open Source Contributions to -
  + [Android Open Source Project](https://android-review.googlesource.com/#/q/owner:championswimmer)
  + [CyanogenMod](http://review.cyanogenmod.org/#/q/owner:championswimmer)
  + [Arduino IDE](https://github.com/arduino/Arduino/commits/master?author=championswimmer)
  + [AOKP](http://gerrit.aokp.co/#/q/owner:championswimmer)
  + [FOSSASIA - Open Event Webapp](https://github.com/fossasia/open-event-webapp/commits?author=championswimmer)
* Android Apps built -
  + [Recovery Manager for Xperia](https://play.google.com/store/apps/details?id=in.championswimmer.twrpxperia)
  + [SubtleNews](https://play.google.com/store/apps/details?id=in.ac.dtu.subtlenews.free)
  + [Trickle - Open Data Visualiser](https://play.google.com/store/apps/details?id=in.tosc.trickle)
* Open Source Android Libraries built -
  + [SimpleFingerGestures](https://github.com/championswimmer/SimpleFingerGestures_Android_Library) - used by over 40 apps on Play Store
  + [Android Social Buttons](https://github.com/championswimmer/Android-SocialButtons) - used by over 20 apps
  + [LifeLog Library](https://github.com/championswimmer/Lifelog-Android-Library)

# Goals

1. **Improved Onboarding on Indic Keyboard:** I believe there is a lot to improve on this one. We can record small video clips of usage and keep them available either in-app, or on-demand via a webview, during the onboarding stage.   
   Also when using the keyboard for first time, we can add protips like long-press spacebar to change language etc.
2. **Make Indic Keyboard SDK module :** Making the keyboard in form of an android library, that can be distributed as maven/gradle dependencies.   
   This might involve significant work, as there would be need to change the build process. The current build process is not suitable for building a library.

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# Availability

I would be able to devote **approx 50 hours** every week to GSOC. During 15th to 25th May I will have my end-sessional examinations, and time devoted would be around 1 hour per day for that time.

I have no obligations after May, and would be devoting all my time to GSOC.

I have been part of developer groups and open source meetups in Delhi, so I would be able to organise FOSSASIA/Open Source events to promote FOSSASIA and it’s initiatives, as I have already done during GSOC 2015.

I will be reporting my work over daily scrum mails on the mailing list. I accept that I was not regular enough last year, and ***I would strive to be regular, and sincere with my scrum and daily updates.***

# Milestones

## Bonding Time

Fix existing bugs, help merging pending PRs, and close issues and create milestones on Github projects.

I already have a copy of libindic-sdk source and Indic-Keyboard source on my laptop, which are buildable, so I would not need any time to get accustomed to the source or the build process.

Discuss with mentors and org admins about roadmap, and finalise the plan of action.

## Week 1 - 3

I believe in ‘doing easy things first’, so I would start off with the work on improving onboarding experience on the Indic Keyboard.   
We can make some slides and demo videos (like the ones used by Jishnu in his DroidCon presentation too), in the onboarding process, so users can learn how to use the Keyboard.   
Also we can make a “Learn” or “Tutorial” section in the app, that users can return to, and use from Settings > Input methods > Indic Keyboard > Help

## Week 4 - 6

Start working on sdk-fication of Indic Keyboard. Identify what all use cases are covered by SILPA/libindic-sdk already and look at what gaps that the Indic Keyboard SDK can fill.   
  
We might need to modularise the Indic-Keyboard project a bit more, and change the build process, so that it’s easier to turn it into a library.

Also it should be made easy to use the libindic-sdk and the Indic Keyboard SDK in combination for various requirements.

Things like the onboarding process etc will not be needed in the SDK, so that can be removed for the library build config.

## Week 7 - 8

Start making extensive sample apps for the Indic Keyboard SDK, and document the usage of the SDK. I believe making an exhaustive sample app for your own library and using it, is the best way to test your own library and improve it.

Work on developing features like custom EditText classes like *IndicEditText* where the developer can define required languages. Like -

<org.smc.indickeyboard.IndicEditText  
 android:languages=”hindi|bangla|kannada”  
 android:layout=”transliterate”/>

## Week 9 - 12

As much as it is possible to be overambitious, and over zealous, truth is, to convert a complicated project like Indic Keyboard into an SDK, it may well take more time that I am currently estimating. So I would not make any special plans for the last 3 weeks of the summer period. Whatever time is left, should be used to improve test cases, increase coverage, and iron out bugs (many would come up) that have developed over the course.

# Other Efforts

I would also like to contribute in translation etc efforts. I can personally contribute Bengali translations. Also I would like to work on popularising the project, and invite more people to translate (via my meetups, friend groups, developer groups etc).

# Why me ?

Firstly, I am an avid open source contributor in the Android domain for a long time, and regularly work with AOSP-like projects, which makes it easy for me to get accustomed to the codebase and the build process for this project, which is a tad bit more complicated than regular apps. (For eg, till recently Indic Keyboard needed to be built in the AOSP tree).

Also, being an Indian, having Grandparents who love to use apps in Bengali (I hail from Kolkata), I understand the need for better infrastructure to build mobile products in native languages. I love projects like SMC and Indic Project for continuously working in that direction.

Also, the recent presentation of Jishnu I saw at DroidCon, where he mentioned the features and advantages of SMC projects, and how there are limitations of contributors, I felt inspired to contribute to this project.