we think code_

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Cost Management Application User Manual

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Introduction

Team KnD Presents...
The gcf Cost Management application

This application it the result three months of research and development by team KnD. As part of the we think code_ curriculum, the Social tech_ project is a prerequisite to graduate from we think code_.

Courtesy of the powers that be we were given the opportunity to gain further real world experience by assisting an SME alleviate the issues that they were facing by means of technology, programming in particular.

In response to the issues faced by gcf Projects© this is our (team KnD's) response.

This manual is intended to outline how to use the gcf projects cost management application ,thus this manual is to be used by users of the application.

In addition to the aforementioned a FAQ will be provided to assist with common issues that one may face whilst using the application.

Technologies used

A wide assortment of technologies were used to develop the gcf Projects Cost Management application. All of which were decided to be the best and most efficient means of accomplishing the required tasks.

Flutter

Flutter is Google mobile UI framework allowing for the development of cross-platform applications with native performance and is the primary means of developing applications for Google Fuchsia.

The alpha version of flutter was released in May of 2017 with a stable version being released on the 4th of December 2018.

In spite of being created by Google, Flutter is an open source framework with a large community of developer constantly creating and updating content for the framework.

The Flutter engine is written primarily in C++, providing low-level rendering support which allows the application to perform to par with native application despite being cross platform.

The entirety of the application is widget based meaning that every element of the application is composed of widgets and in most cases widgets within widgets.

Dart

Dart is a general purpose programming language originally developed by Google and later approved as a standard by Ecma (ECMA-408).

Dart is an object-oriented, class defined, garbage-collected language using a C-style syntax that trans compiles optionally into JavaScript.

Dart was unveiled at the GOTO conference in Aarhus, in October of 2011. The project was founded by Lars Bak and Kasper Lund with Dart 1.0 being released in the November of 2013 and Dart 2.0 being released in the August of 2018.

Firebase

Firebase is a mobile and web application platform developed by Firebase Inc in 2011, then acquire by Google in 2014.

Firebase provides a wide array of services including , but not limited to, analytics, development, hosting and storage.

Android Studio

Android Studio was built on JetBrains' IntelliJ IDEA software. Android studio was announced on May 16 2013 at the Google I/O conference, with the first stable version being released in December of 2014.

To install Android Studio visit Android Studio and follow the instructions.

Visual Studio

Visual Studio Code is a source code editor developed by Microsoft for Windows, Linux and macOS

To install Visual Studio Code visit Visual Studio Code and follow the instructions.

The gcf Projects Cost Management application

Getting started

The gcf Projects cost Management application was designed with user friendliness in mind, as such the application is intuitive and easy to understand.

Installation guide

To install that gcf application you will need the following:

- A cellular device
- An apk/ipa of the application
- An internet connection*

How to install the application

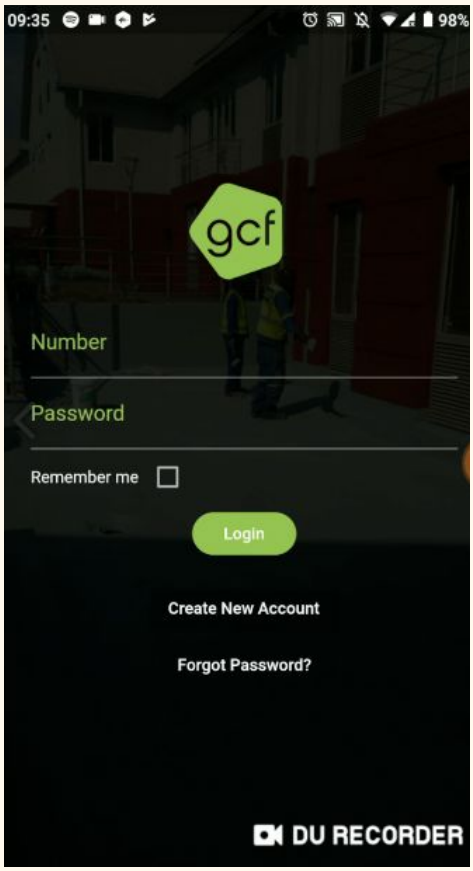
1. Locate the apk/ipa file and run it
2. Follow the prompts
3. Open the application

The gcf Cost Management application

After having installed the application it will now be available among the other applications on your device

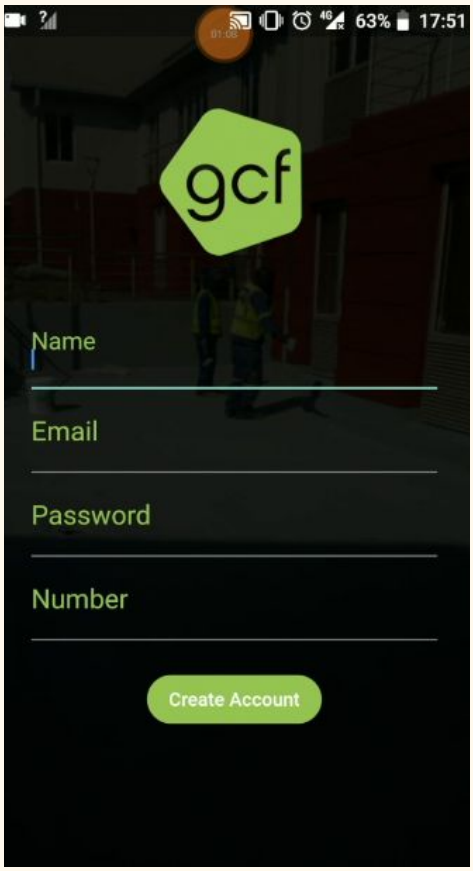
Opening the application

Once the application has opened you will be faced with a login screen where you may type your cell phone number and password. In the event that you are not already a user you will need to create a new account and wait for your administrators approval.



Create Account

If you do not already have an account you will need to create one. On the login page press ‘Create New Account’ to create a new account. Doing so will open the create new account page.



On this page you will need to fill in the needed fields and press create account. An administrator will have to approve your request before you can use the application (*see accept new user*).

User roles

The gcf Cost Management Application has three user roles:

- User
- Foreman
- Administrator

User

A general purpose account (the default role for all new users) intended for use by individuals who are a part of the company but do not have the permissions to make approve users. Users will not appear on the list of foremen and will not see any active projects. They may however view both logs and statistics as well as

active users but they will be unable to promote/demote user roles, delete or approve/deny users.

Foreman

The foreman role is intended to be used by foremen. Their names will appear on the list of foremen under ‘Foreman on site’ when creating new projects as well as in project reports.

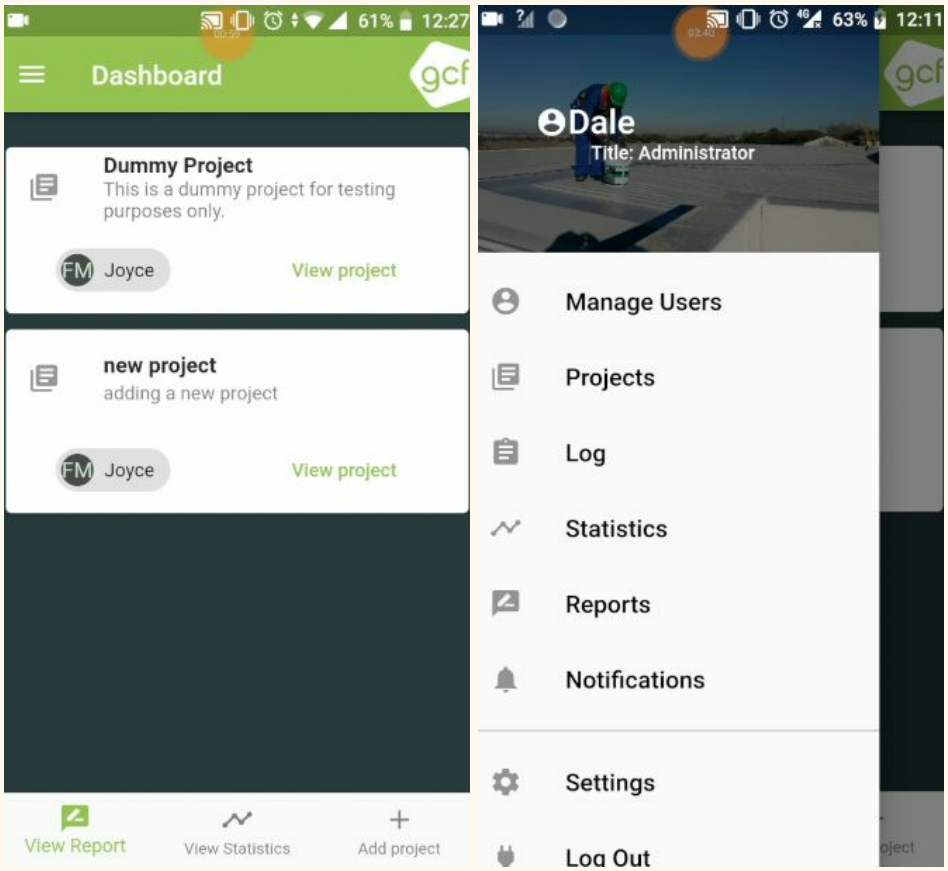
Administrator

Administrators are the highest ranked users in the application, they can approve/deny new users, promote/demote users and delete users (including other administrators).

The burger menu

By tapping on the burger menu a side bar will appear. This sidebar is the main means of navigating the gcf Cost management Application. From the burger menu you can access:

- Manage Users
- Projects
- Log
- Statistics
- Reports
- Notifications
- Settings
- Logout



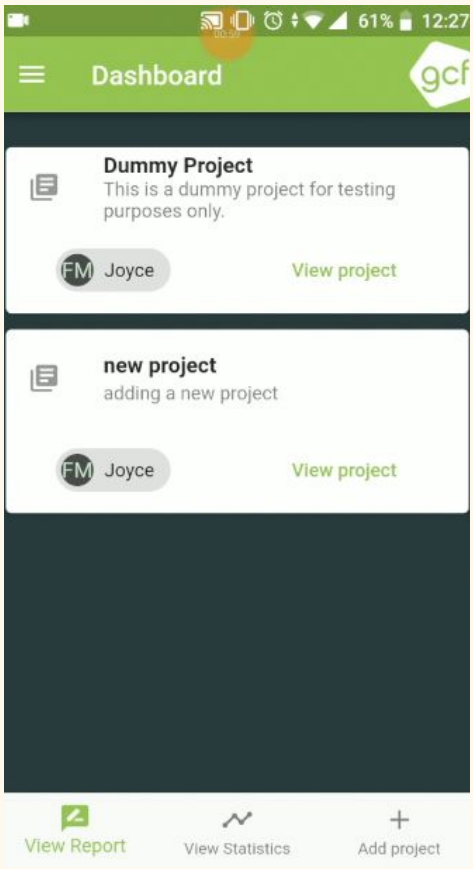
In order to create

Accept new user

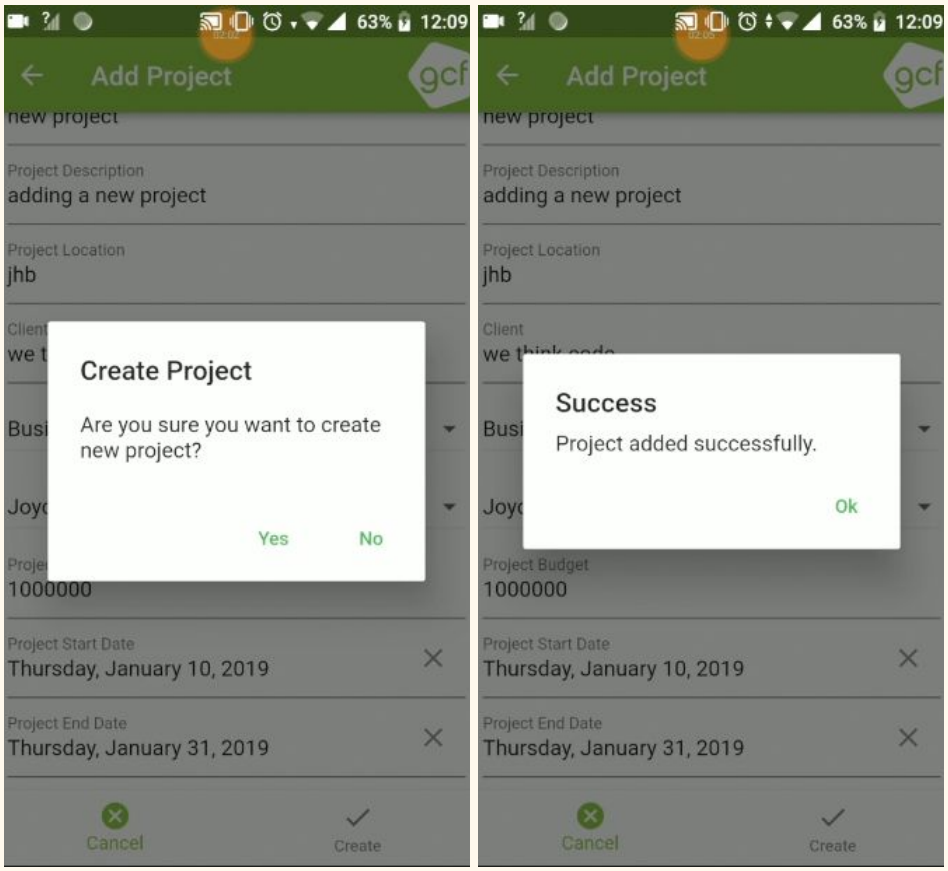
Only administrators may approve new users. When a new account is created a notification will appear in the burger menu informing any administrators that there is a new user requesting permission to use the application. In order to accept or deny access to this user any on the administrators can be to the ‘Manage users’ page and accept or deny access.

Add project

In order to add a new project you will need to be on the Home page (Projects). There will be a tab at the bottom of the screen and on the far right of that tab will be an 'Add Project' button. pressing that button will open the Add Project page.



Once the Add project page has appeared simply fill it in with the required information and click on the ‘create’ button at the bottom left of the screen to create the project. Doing so will open a popup that will ask if you are sure you want to create this project, pressing ‘no’ will cancel the creation of the project and pressing ‘yes’ will open another popup informing you that your project was created successfully. Pressing ‘ok’ will close this popup.

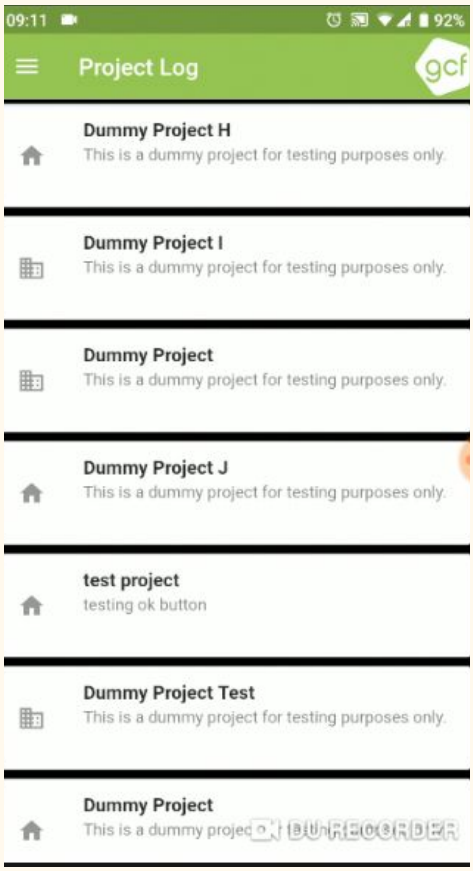


Add Expense

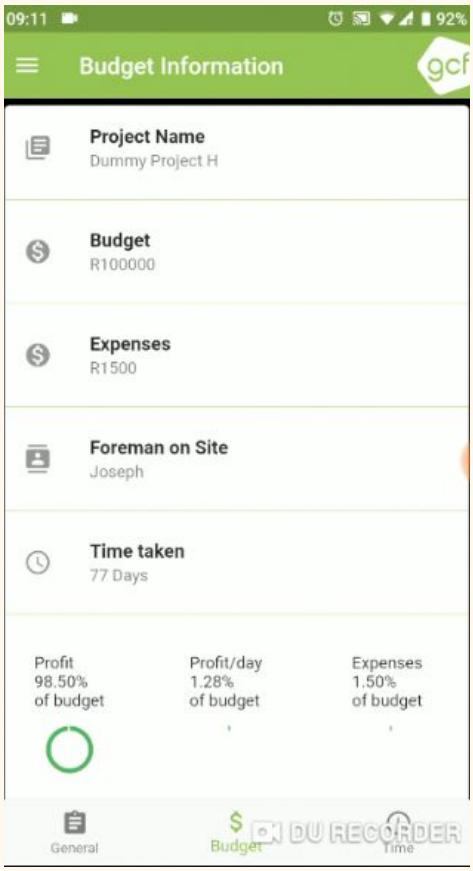
Once you have created a project you will be able to add expenses relating to that project. In order to do this you need to click 'view project' on the project that you want to add an expense to. That will open the Project view page

View project log

The project log only logs closed projects (projects that have been completed). The project log will give various information on the project such as how much it cost, what it's budget was, who was the foreman on site, how long the project took etc.

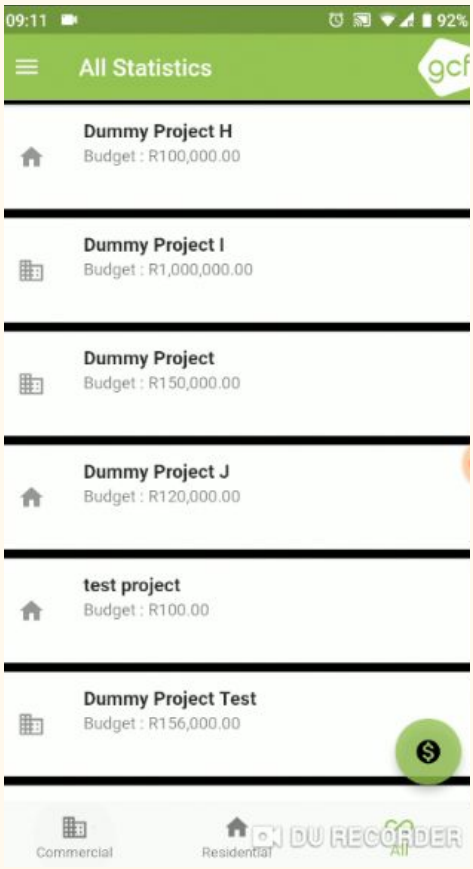


To access the project log simply open the burger menu and select log from the options, this will open the project log page. Tapping on one of the log projects will open additional information on the log. The additional information is grouped into three sections namely general, budget and time.



View statistics

The statistics page generates statistics from the project in the project log (closed project) and provides a range of information similar to that in the project log but more detailed and mathematically inclined.



To access the stats page simply open the burger menu and select stats from the options, this will open the project stats page. The statistics page has three sections namely commercial, residential and all.

FAQ

Q: Can I use this application offline?

A: No, without an internet connection you will not have access to the login screen.

Q: Is this application free?

A: To use the application is free and as long as the database stores less that 1GB of data, hosting it will be free.

Q: How much does it cost to host a database larger than 1GB?

A: $25/month for 2.5GB (Flame plan) and $0.18/GB (Blaze plan).

Q: How many simultaneous connections can there be?

A: On the free price plan (Spark plan) 100, on the $25/month price plan (Flame plan) 100 000 and 100 000/database on the Blaze price plan.

Q: What devices are supported?

A: Android and iOS devices

Q: Is there a PC version of the application?

A: At present there is not, but porting the application to both Windows and macOS is possible.

Q: Does this application use a lot of data?

A: Data usage is kept to a minimal amount.