

# User Manual

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## Notes

- Usernames for login are *not* case-sensitive
  - Administrator username: ***admin***
  - Phones used as emulators:
    - Nexus 5x
    - Google Pixel
    - Samsung Galaxy S9
  - Recommended for phones with screens equal to or larger in size than those listed
  - Administrator cannot edit cryptogram *after* it has been created.
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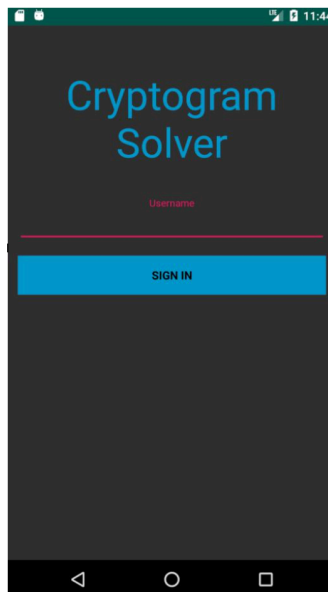
## 1. Overview

This application exists to appease unruly neighborhood children's desire to solve puzzles. It is a puzzle solving game, where one user creates a series of "Cryptogram" puzzles in which a string, any string, is converted into a jumbled mess of characters. Spacing and non-alphabetic characters are preserved in their original place in the string and are unencrypted. All alphabetic characters are encrypted by a basic cypher algorithm. The case of each letter is preserved (lowercase/uppercase). A player will have a certain number of guesses to unscramble the encrypted cryptogram puzzle - if they are successful they win; if they fail to solve the puzzle they lose.

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## 2. Types of Users

There are two types of user for this application: an administrator and several players. The administrator and the players are first given a chance to log into the game:



The login credentials they supply affect whether or not they will have admin privileges, explained below.

## Administrator

**Administrator username: admin** The game is played on one device shared between all players. For the current use of the game there is only one administrator. The credentials for *the* administrator are hardcoded into the program. If a user provides the correct admin credentials he/she will go to a main menu with the following options:

- Create a player
- Create a cryptogram
- View Player Statistics

## Player

Even though the game can only be played on one device, it is still intended to be multiplayer. A user with admin privileges can create as many players as he/she desires, all of whom can perform the following actions from the player's main menu after a successful login:

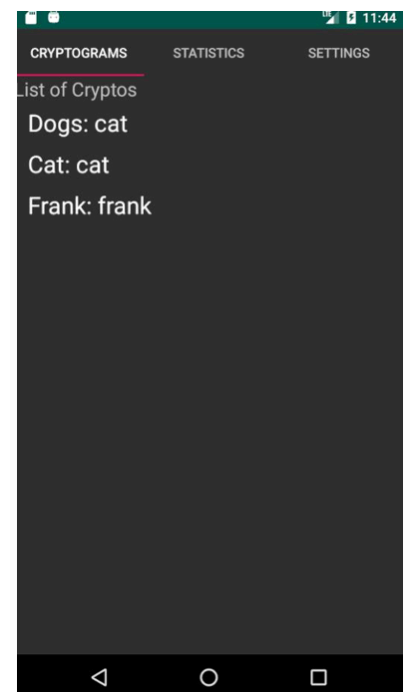
- View a list of cryptograms
- Select a cryptogram to attempt from the list
- View player statistics
- Log out from the settings menu (or by a back button press from the main menu)

Every player will be assigned a difficulty level upon creation. This difficulty level determines how many attempts the player will have to answer each cryptogram. Every can have a different number of attempts for each difficulty level (Easy, Medium, Hard).

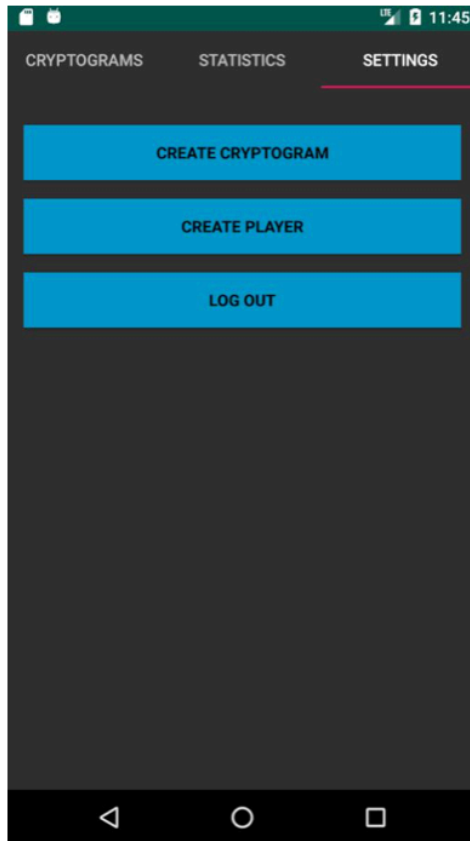
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## 3. How to Create A Player

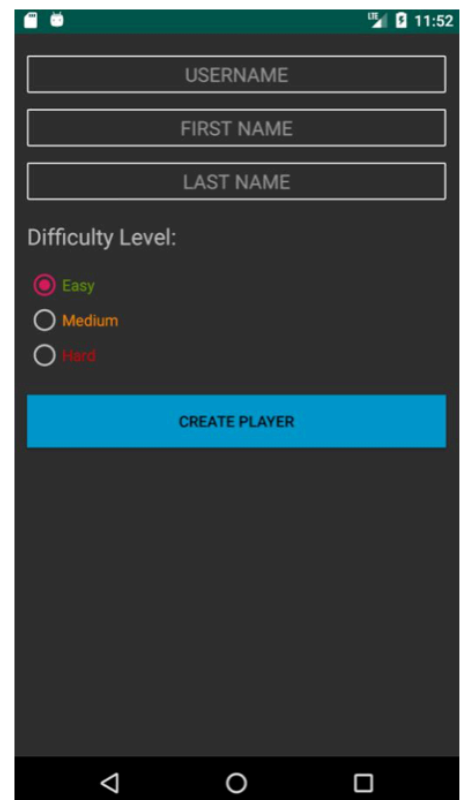
**Note: A Player can only be created by an administrator** 1. Log in as an administrator by providing administrator credentials. User will be directed to the main menu:



2. From the administrator's settings tab, select Create Player and the following will be displayed:



3. Enter a unique *Username* for the player
4. Enter the player's *First Name* and *Last Name*
5. Choose the the *Difficulty Level* for the player (Easy, Medium, Hard)
6. Select the **Create Player** - Warning: If any of the fields are blank, the application will prompt the user to fill in all of the fields - Warning: If the *Username* entered is not unique, the user will be prompted to select a different, unique *Username*
7. A new player has been created successfully and the administrator will return to the main menu.

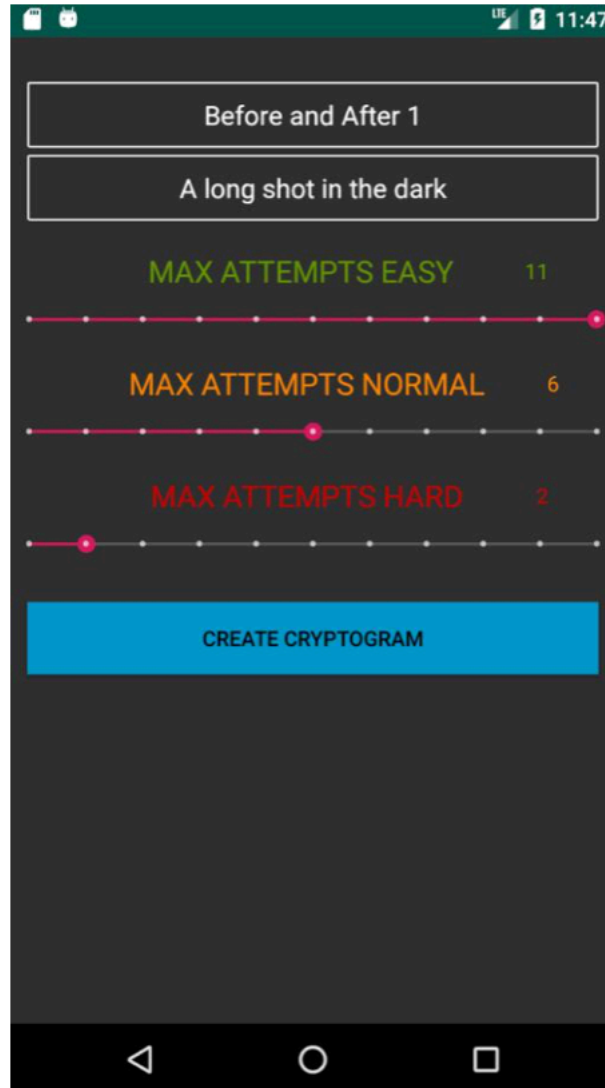


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## 4. How to Create a Cryptogram

*Note: a cryptogram can only be created by an administrator*

1. Log in as an administrator by providing administrator credentials. User will be directed to the main menu. In the settings tab click on **Create Cryptogram** and the following will be displayed:



2. Enter a unique *Name* for the cryptogram. Think of this as a category from Wheel of Fortune (e.g. "Before and After 1") - something that gives the player a slight hint and also allows the player to choose a cryptogram based on their interests.
3. Enter the *Solution* which is the phrase that will be encrypted. For the above example, the solution to

encrypt might be "A long shot in the dark"

- Using the three sliding bars, choose the number of attempts a user of each difficulty level (Easy, Normal, Hard) will have to solve the encrypted phrase (a value between 1-11, inclusive).
- Select **Create Cryptogram** to encrypt the the *Solution* phrase into a cryptogram with the given *Name* and number of attempts.

Warning: If *Name* is not unique, an error message will prompt the user to enter a unique name.

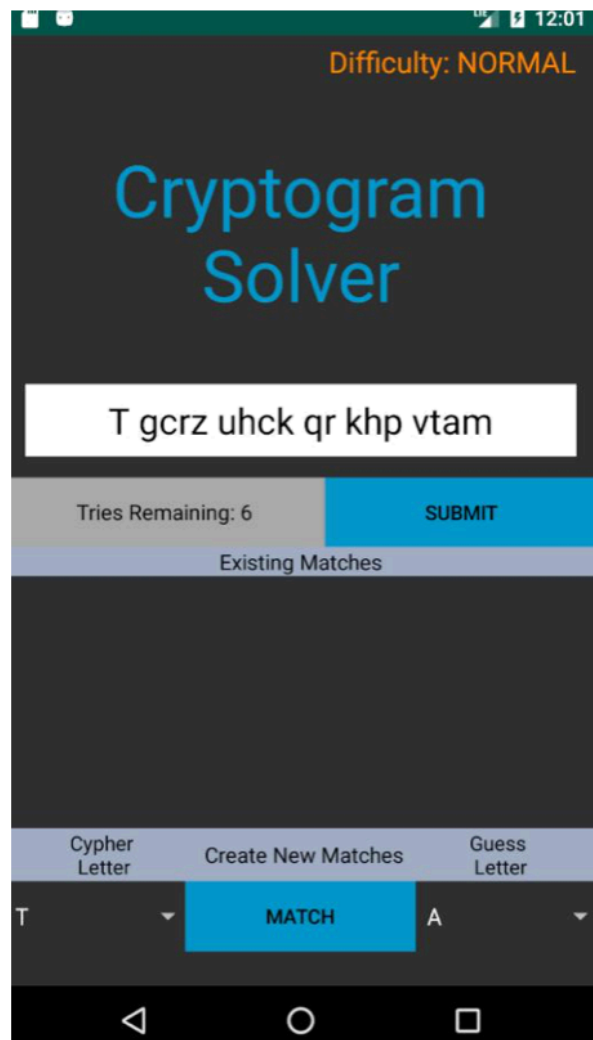
Warning: All fields are mandatory. If no *Name* or *Solution* is provided, the user will be prompted to enter one.

- A new cryptogram has been created successfully and the administrator will return to the main menu.

## 5. How to Play

*Note: a cryptogram can only be played by a player*

- Log in as a player by providing non-administrative credentials
- When logged in the player will land at the main menu with three tabs (Cryptograms, Statistics, Settings)
- In the Cryptograms tab, the player will be able to see a list of all cryptograms with their current playability status (New or Resume) - New: a the player has not attempted this cryptogram yet - Resume: a player has attempted this cryptogram but has not yet won or lost - Cryptograms that have been completed (won *or* lost) do not appear in the list
- Player may choose and cryptogram from the list
- When the player chooses a cryptogram from the list, he/she will be directed to the screen to the right:
  - The player's difficulty is shown in the upper right-hand corner
  - The encrypted phrase is shown in the white box in the center
  - The list in the center displays all currently matched letters (explained below)
- To 'play' the cryptogram a player's goal is to substitute letters in the encrypted phrase to unscramble the phrase. For example the phrase "I am a dog" might encrypt to "N mh m yti" so the player would have to substitute letters in the encrypted phrase to match what they believe the solution is supposed to be.
- This is accomplished by using the lower left drop down box to select a letter that is currently in the encrypted phrase (For the example, the letters in the left drop down box would be 'n', 'm', 'h', 'y', 't', 'i').
- The next step is to select a letter form the right drop down box to substitute in place of the letter in the left box.
- Next, select Match and the letter on the right will be substituted for the letter on the left and a record will be shown in the list area below "Tries Remaining"



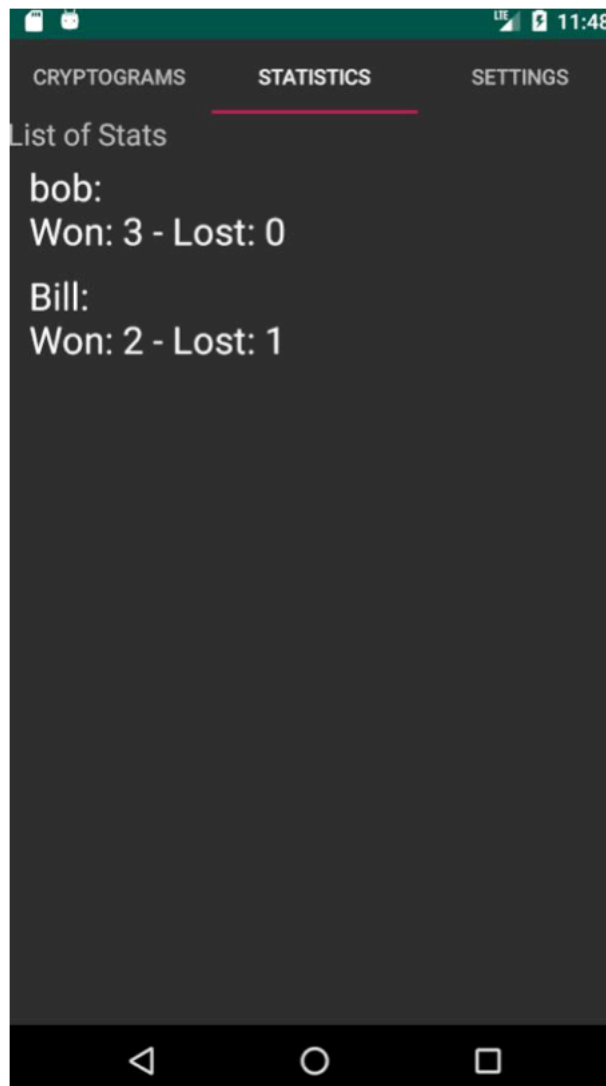
10. For this example, the correct substitutions would be as follows: - n - i - m - a - h - m - y - d - t - o - i - g

11. Once the guess is attempted and all letters are matched to a substitute, select Submit 12. The guess is evaluated to one of the following options:

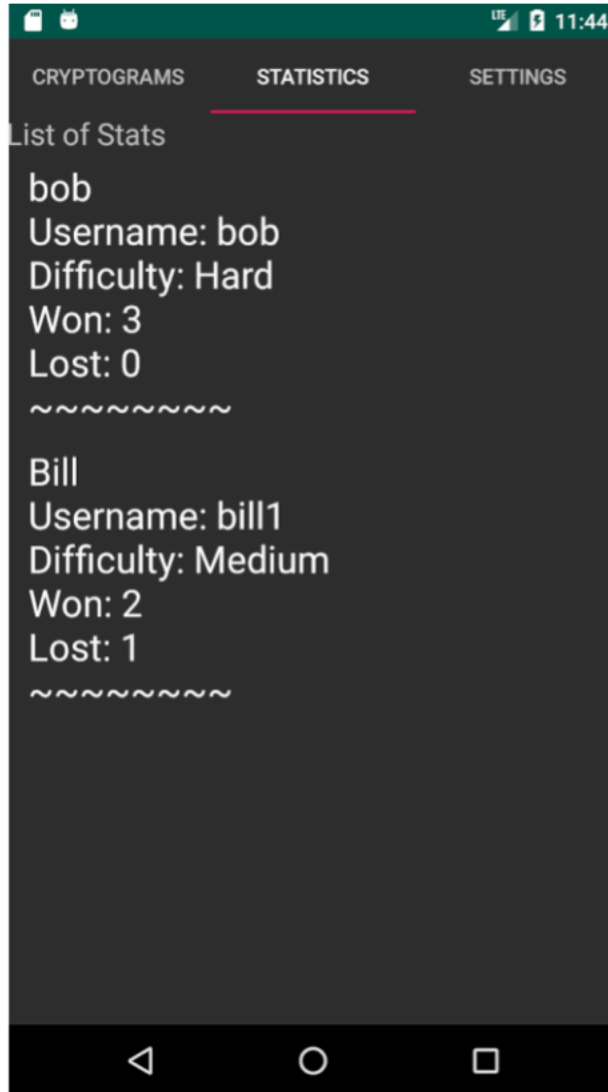
- If the player is out of remaining attempts and the guess was unsuccessful, the player will be notified they lost and can return to the main menu.
  - If the player's guess was successful, the cryptogram status is changed to "Won" and the player can return to the main menu.
  - If the player's guess was unsuccessful and there are attempts remaining, the player stays at the cryptogram solver page and another attempt is possible
  - The player may return to the main menu at any time.
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## 6. View Player Statistics

1. Once the user is logged in as a player or administrator they can choose the **Statistics** tab from the main menu.
2. For a Player user, this tab lists all of the players' First Names, Number of Cryptograms Won, and Number of Cryptograms Lost:



3. For an Administrator user, this tab lists all of the players' First Name, Number of Cryptograms Won, Number of Cryptograms Lost, and Player Difficulty:



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## 7. Logistics

- At any time a user may log out by going to the settings tab and logging out or by pressing the devices' back button from the main menu