***Team Details***

***Team Name:*** 2\_Fast\_4\_U

***Team Memebers:***

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Registration No. : 2019

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***Hex It (Hex-Editor)***

**Problem Statement :**

Shrey, as you all must have seen in the Softablitz Classes, has the habit of NOT believing anyone easily. He even goes to the root of the files you are sharing with him to find out what's hidden. His "Revengg" mindset leads him to hide real information behind the files. Help him be the Sherlock by developing a Hex Editor for him. This will also help him to exchange messages with his beloved ensuring top level of privacy. Guys! Don't disappoint him. He will definitely give you “shrey” for developing it.

**Features you are implementing :**

1. A files tab with support of OS ‘s file system like Open Recent Files, New File, Open etc.

2. Hex editor with two sections, Contains Four Section :

1. Open File in Hex View

* This section is further divide into two sections (Hex Bytes, Plain Text).
* Changes in one section should be reflected in the other section.
* Basic editing features such as cut, copy, paste, delete along with multi- level UNDO and REDO.
* Users should be able to open multiple files in different tabs.
* HEX code should be byte separated.

1. Hex Converter

* Convert Numbers of different Number Systems into one another.
* E. g - (Hex-ASCII) , (Hex-Decimal), (Hex-Binary) etc.

1. Hex Calculator

* Do Mathematical Operations on Hex Numbers (only) .
* Operations such as byte flip, block shift, <<, >>, ~, |, &, +, -, \*, /, % etc.

1. Analysing the file with Forensics Tools

- Identify File Type using Headers of Hex Code. (e. g. CA FE BA BE identifies Java Class File)

- Analysis of complete file and Give info about Hidden files Using their Headers and Footers (like Binwalk Forensics Tool).

- Options For extract Hidden files (like Foremost Forensics Tool).

3. It support for editing files of common formats e.g. JPEG, C, Java, txt etc.

5. Users should be able to save files in formats such as pdf, c, java, txt etc.

6. Support for keyboard shortcut key bindings for common operations such as

Ctrl + c, etc.

7. Find and Replace feature with single instance and all instances support.

8. Add "Hex Edit" to Windows Right-Click Context Menu to view and edit files .

**Tech Stack :**

**Github link :**

(<https://github.com/AmitGupta7580/Hex-It> )

***REVENGE LIVE***

***<karim ye wala edit kar>***

**Problem Statement :**

Twitch is a video live streaming service with a plethora of features. But this giant platform has some major flaws such as controversial moderation, low quality of support to streamers by platform, toxic community thus Mixer (by Microsoft) came to destroy Twitch but after struggling in getting viewership Twitch crushes the Mixer. Since Shrey believed in Mixer and is a good friend of Anuj but this defeat created a fire in him. Now it's your time to prove yourself worthy and help Shrey to destroy Twitch :)

**Features you are implementing :**

Basic Features:

User:

1. Can sign up and Login / Logout.

2. Has a profile page (Profile image, name, bio..).

3. Set status (Online/Offline).

4. Can search channels.

5. Can watch a channel.

6. Can chat with the community (like conversation side to live stream).

Streamer:

1. User can create/modify their channel (one per user)

2. Can start/stop stream

3. Can stream from desktop/camera with audio(microphone).

4. Is able to see separate chats (All users/ Subscribers only)

Platform Home Page

Advance Features:

User:

1. Can see last seen of other users.

2. Can browse channels based on categories

3. Can follow/subscribe a channel

4. Can mute/pause the stream (client side)

5. Get notified when followed channel starts streaming

6. Can do direct messaging other users

Streamer:

1. Can schedule their live streams (Visible to everyone)

2. Can mute/unmute himself

3. Can streams either for All users or for subscribers only.

4. Is able to choose a streaming source (desktop/camera/both).

5. Sync audio (from mic) with stream

6. When the stream ends can redirect viewers to other live channels.

7. Get recommendations of channels based on the followed channels

Note: Subscribing a channel costs money so you can create a dummy payment system.

For this problem statement you can use following libraries

1. OpenCV

2. Webcam Capture API (https://github.com/sarxos/webcam-capture)

3. Xuggler

**Tech Stack :**

**Github link :**

(<https://github.com/rdx-rockstar/Softabliz2020> )