Team Project Details

Project Name: TRPG Assistant

Team 12 (lanxuanz, zhipingl, yjia2)

1 Background

1.1 What is TRPG

TRPG (Tabletop Role-Playing Game) is a form of role-playing game in which players describe their character's actions through speech. Participants determine the actions of their characters based on their characterization, and the actions succeed or fail according to a set formal system of rules and guidelines (Generally, to judge whether an action succeeds or fails, players need to roll dices). Within the rules, players have the freedom to improvise; their choices shape the direction and outcome of the game. Most popular TRPG game templates can be divided into two groups: DND and CoC.

1.2 Our motivation

Nowadays, more and more players start to play TRPG through internet and social applications so that they can enjoy the game even though they are far away from each other. However, There are some difficulties to play TRPG online. First is how to maintain the consistency of characters' information. The common solution is through cloud documents such as Google docs. Second, it is difficult to describe visual information through speech. Moreover, how to record the game process is also very troublesome. Therefore, we come up with the idea that we can build a website which integrates those functions.

1.3 Vocabulary

- GM (Game Master): The host of the game. GM takes the responsibility to weave the other participants' player-character stories together, control the non-player aspects of the game, create environments in which the players can interact, and solve any player disputes. Based on different templates, GM will have other corresponding names.
- DM (Dungeon Master): The GM of DND games.
- KP (Game Keeper): The GM of CoC games.
- PL (Player): Participants of the game. They will play the game hosted by the GM. Both GM and PL are real person in the world.
- PC (Player-Character): The character created and controlled by the PL. PC is virtual character in the game, not real person in the world.
- mDn: A terminology for rolling dices. n represents the number of the surface of a dice and m stands for how many times one should roll such dice. For example, 3D6 means someone need to roll a dice with 6 surfaces 3 times, and then add up the results. D100 means someone need to roll a dice with 100 surfaces (Actually we use 2 dices with 10 surfaces to implement that) once.

2 Product Backlog

- User Information
  - **Register**: Allow players to register as users in the application.
  - **Login**: Players can login as users in the application.

  - **Profile customization**: For the players who login as users, they can customize their profile by uploading images and updating personal information. Such profile will be used to create/load/save games and chat with other players.

- Game Data
  - **Create game**: Users can create a new game. The player who create the game will become GM (the host). GM cannot create PC, but other players can join GM's game as PLs.
  - **Join other player's game**: Users can join other players' games. Once they have joined some other's game, they will become PLs, which means they can start creating their PCs.
  - **Save game**: Users can save unfinished game to the database, which allows them to continue the game in the future. Most of the relevant game data (canvas, PCs, etc) will be saved at the same time.
  - **Load game**: Users can load saved game from the database to continue it.
  - **Create PC information**: PL can create a PC based on specified rules before a new game start.
  - **Maintain PC information**: The PC's information will be stored in the database. Such information can be viewed and edited during the game process.

- Game Process
  - **Canvas**: After the game start, a game process page will be shown to GM and PLs. In that page, there will be a large shared canvas. GM and PLs can draw on the canvas. They can also upload local images to the canvas as the background.
  - **Log window**: Key information will be recorded and shown on the log window. Only GM can edit it.
  - **Text chat window**: During the game process, PLs and GM can communicate by typing in the chat window. Chatting text will be updated real-time.
  - **Drag icons**: During the game process, there will be some dragable icons. GM and PLs can drag them on canvas to indicate some information.
  - **Roll dices**: A random number generator. There will be several range of the random number (D2, D3, D4, D6, D8, D10, D20, D100). GM and PLs can choose which range to use everytime they want to generate a random number.
  - **Access PCs**: GM and PLs can get access to PCs' information during the game process. GM can view and edit any PCs' information while PLs can view any PCs but edit only themselves' PCs information.

3 Sprint #1

3.1 Product Owner

lanxuanz

3.2 Backlog

- UI Design (zhipiingl)
- Model Design (lanxuanz)
- Login (yjia2)
- Register (yjia2)

4 Data Models

```
from django.db import models
from django.contrib.auth.models import User


class Profile(models.Model):
    bio = models.CharField(max_length=200)
    user = models.OneToOneField(User, on_delete=models.PROTECT)
    picture = models.FileField(blank=True, upload_to="")
    content_type = models.CharField(max_length=50)


class Game(models.Model):
    GM = models.ForeignKey(User, on_delete=models.PROTECT)
    PLs = models.ManyToManyField(User)


class Chat(models.Model):
    text = models.CharField(max_length=200)
    user = models.ForeignKey(User, on_delete=models.PROTECT)
    game = models.ForeignKey(Game, on_delete=models.PROTECT)
    date = models.DateTimeField(auto_now_add=True)


class Log(models.Model):
    text = models.CharField(max_length=200)
    game = models.ForeignKey(Game, default=None, on_delete=models.PROTECT)
    date = models.DateTimeField(auto_now_add=True)


class CharacterCOC(models.Model):
    # relationships
    PL = models.ForeignKey(User, on_delete=models.PROTECT)
    game = models.ForeignKey(Game, on_delete=models.PROTECT)

    # basic information
    name = models.CharField(max_length=50)
    birthplace = models.CharField(max_length=50)
    gender = models.CharField(max_length=20)
    occupation = models.CharField(max_length=50)
    residence = models.CharField(max_length=50)
    age = models.IntegerField()

    # characteristics
    strength = models.IntegerField()
    constitution = models.IntegerField()
    dexterity = models.IntegerField()
    size = models.IntegerField()
    power = models.IntegerField()
    appearance = models.IntegerField()
    intelligence = models.IntegerField()
    education = models.IntegerField()
    luck = models.IntegerField()

    # status
```

```
current_hit_points  = models.IntegerField()
current_magic_points = models.IntegerField()
current_sanity  = models.IntegerField()
temporary_insanity = models.BooleanField(default=False)
 indefinite_insanity  = models.BooleanField(default=False)
major_wound = models.BooleanField(default=False)
unconscious = models.BooleanField(default=False)
dying = models.BooleanField(default=False)

# descriptions
my_story = models.CharField()
wealth = models.CharField()
items = models.CharField()
personal_description = models.CharField()
ideology_beliefs  = models.CharField()
significant_people  = models.CharField()
meaningful_locations = models.CharField()
treasured_possessions = models.CharField()
 traits  = models.CharField()
injuries_scars  = models.CharField()
phobias_manias = models.CharField()
arcane_spells = models.CharField()
encounters_with_strange_entities = models.CharField()

#  skills
accounting = models.IntegerField(default=0)
anthropology = models.IntegerField(default=0)
appraise = models.IntegerField(default=0)
archaeology = models.IntegerField(default=0)
 art_craft  = models.IntegerField(default=0)
charm = models.IntegerField(default=0)
climb = models.IntegerField(default=0)
 credit_rating  = models.IntegerField(default=0)
cthulhu_mythos = models.IntegerField(default=0)
disguise = models.IntegerField(default=0)
dodge = models.IntegerField(default=0)
drive_auto = models.IntegerField(default=0)
elec_repair  = models.IntegerField(default=0)
 fast_talk  = models.IntegerField(default=0)
 fighting  = models.IntegerField(default=0)
firearms  = models.IntegerField(default=0)
 first_aid  = models.IntegerField(default=0)
 history  = models.IntegerField(default=0)
 intimidate  = models.IntegerField(default=0)
jump = models.IntegerField(default=0)
language = models.IntegerField(default=0)
law = models.IntegerField(default=0)
 library  = models.IntegerField(default=0)
 listen  = models.IntegerField(default=0)
locksmith = models.IntegerField(default=0)
mech_repair = models.IntegerField(default=0)
medicine = models.IntegerField(default=0)
natural_world = models.IntegerField(default=0)
navigate = models.IntegerField(default=0)
 occult  = models.IntegerField(default=0)
persuade = models.IntegerField(default=0)
```

```
 pilot  = models.IntegerField(default=0)
psychoanalysis = models.IntegerField(default=0)
psychology = models.IntegerField(default=0)
ride  = models.IntegerField(default=0)
science = models.IntegerField(default=0)
sleight_of_hand = models.IntegerField(default=0)
spot_hidden = models.IntegerField(default=0)
stealth  = models.IntegerField(default=0)
survival  = models.IntegerField(default=0)
swim = models.IntegerField(default=0)
throw = models.IntegerField(default=0)
track  = models.IntegerField(default=0)
others = models.IntegerField(default=0)
describe = models.CharField()
```

Listing 1: models.py

5 User Interface

5.1 Homepage before login

In this page, users can choose to login or register.

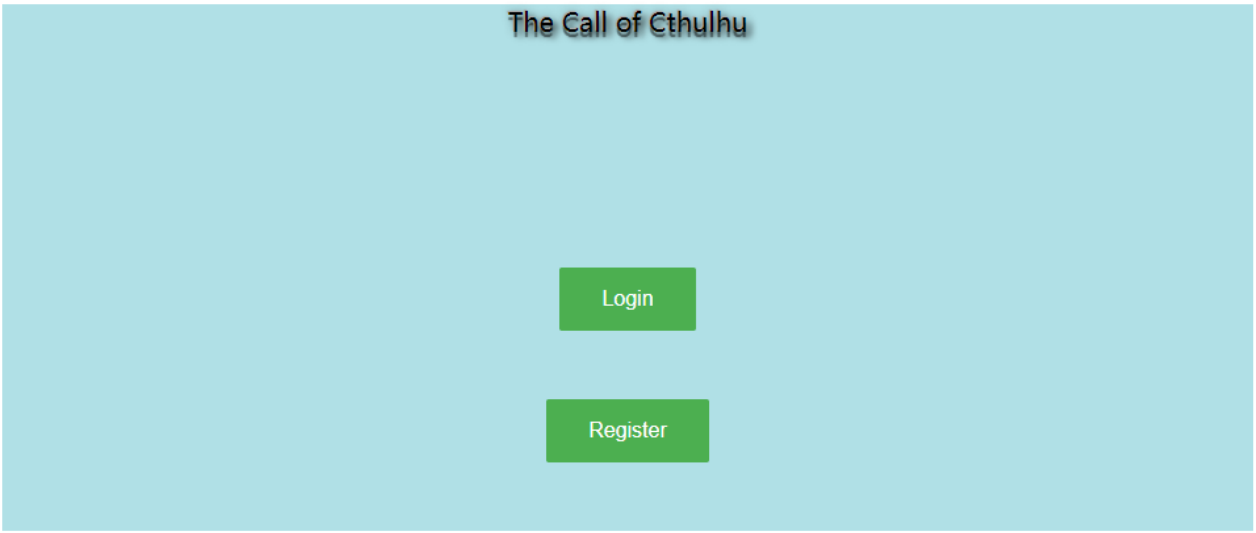

Figure 1: Homepage before login

5.2 Homepage after login

In this page, users can choose to create a new game, or load an unfinished game, or join others' game. They can also get access their profile pages.

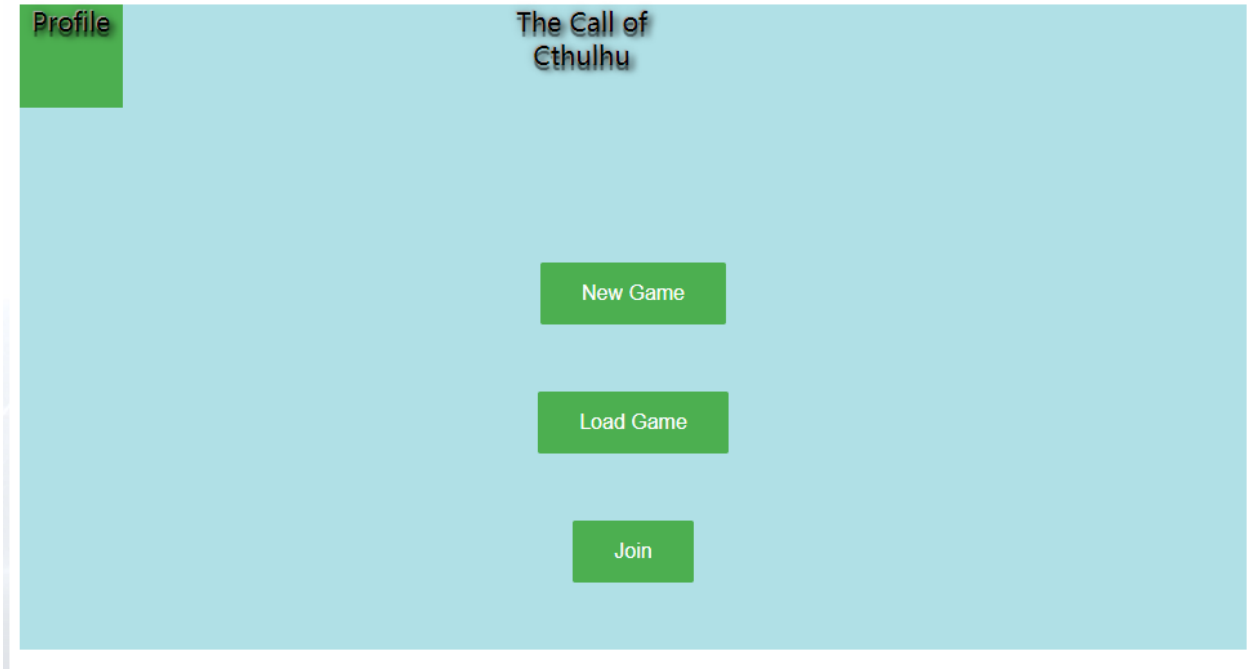

Figure 2: Homepage after login

5.3 Game process page

In this page, users can get access to PC's information, draw on the canvas and upload images to the canvas, chatting with other PLs, record the game, drag icons, and roll dices. When users want to exit the game, the can click on "Save" button so that the game information will be stored to the database.

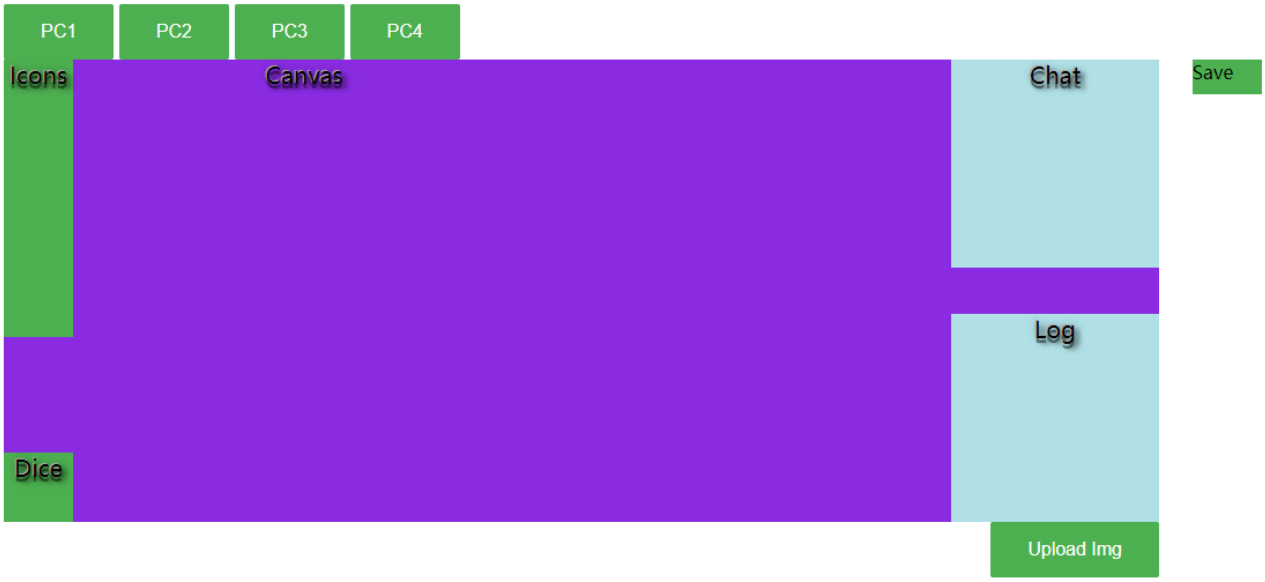

Figure 3: Game process page

(This is not our final design. We will make the design more beautiful before the final demo)