Check Point 2

- **Project:** Designing a meditation app

- **Rationale and Purpose:** During the last two decades, meditation has been found in several studies to reduce anxiety, increase positive affect, improve individual's psychological capacities, such as attentional and emotional self-regulation, and so on. There are also tons of meditation apps on the market for busy people to practice meditation to improve their psychological and physical health. As novices at meditation, however, we found that it is quite challenging to form a habit to practice meditation regularly even we have recognized lots of benefits brought by mindfulness meditation and only need to take five to ten minutes to practice. Therefore, we would like to design an app that can motivate beginners to practice meditation on a regular basis.

- **Insight from competitive analysis:** Last time, we conducted a competitive analysis. We found that what makes the app standing out is the way they organize and present content. Furthermore, from existing meditation apps, people can hardly receive feedback after they complete meditation, which might lead people easy to quit the meditation.

- **Planning interviews:**
  - Organizing and Presenting information:
    - We would like to design an intuitive interface for users to find the course they need easily. Yet, there are many ways to organize and categorize the content, such as the duration of meditation, the function of courses (e.g. reduce anxiety, sleep well, etc.), the form of courses (with tutoring or not) and so forth. Before we decide how to organize and present the content, we would like to know when people would practice meditation (in what context people would use the meditation app) and how they search courses in the app. So we want to recruit beginners to conduct interviews to learn more about these questions.

- Motivation to practice meditation:
  - As mentioned above, out goal is to facilitate to form a habit to practice meditation. Therefore, we want to find out the motivational factors as determinants of the likelihood of performing meditating through interviews. We utilize **integrated behavioral model** (**IBM**), which provides a theoretical basis and for understanding behavioral and identify specific beliefs to target, to form interview questions.

Interview Questions	
Context of Usage	• What motivate you to start practicing meditation? • When will you practice meditation? • Did you ever tried any meditation apps before? • If yes, can you describe how you use it to practice? (or demo)
Forms of Meditation	• Which forms of meditation you prefer, guiding or non-guiding? And why? • Are there any other ways that you like to utilize to practice meditation?
Experiential Attitude	• How do you feel about the idea of meditation? What do you like/dislike about meditation? • How do you enjoy/hate about meditation?
Instrumental attitude	• What are the benefits that might result form practicing meditation (for a long time)? • What are the negative effects you think that might result from practicing meditation?
Perceived control	• What things make it easy for you to practice meditation continuously? • What things make it difficult for you to practice meditation continuously?
Self-efficacy	• If you want to practice meditation on a regular basis, how certain are you that you can? • What other factors affect your ability to form a habit to practice meditation?
Social Support	• Who would support you practicing meditation? Or someone who might against? • Who can you think of that would practice meditation?

- We plan to find interviewees in a regular held meditation group/event in Austin. We targeted the mindfulness meditation group held by CMHC every Tuesday. It's a free meetup and open to all UT students/faculty/staff. We have been to a meetup on November 13th to understand how the group works and what the characteristics of the participants are. It is an unguided meditation class. When hearing the sound of the bell, people just sat quietly, closed their eyes and started

meditation. And the meditation ended with another sound of the bell. It was very different from tutorials of meditation apps, in which usually there's someone telling you how to do meditation. After the meditation session ended, we talked with the group host, Dr. Chiang. He said this meditation group has been running for more than 4 years, and people come here to meditate for many reasons. He is willing to schedule a further discussion with us and introduce some meditators to us. We will check the time table with him this days.

- Design:

  To facilitate users to form a habit of meditating, we would like to create a game that using building a planet to reinforce the behavior of meditating. Here are some features that we include in the app: crystals as a reward, leveling up while finishing a session of courses, social connection (such as adding friends, sharing progression with others, and booking a time to meditate together), and data visualization to help users to track on regular basis.

  In addition to conducting an interview to have an insight of users need and intention, we need to use well-developed theory to support our design. Here are some theories we utilized as a fundamental of our design.

  There are several theories that can support our design decisions. For example, Transtheoretical Model suggested that by creating simplicity and enabling factors, users may feel easier to complete meditation and become more willing to stay with the practices. Similarly, **Health Belief Model** pointed out that the design should be able to reduce users' perceived barriers and increase self-efficacy (skills training). As a result, to help the beginners develop the habit of meditation, we suggest shorter tutorial sessions in the beginning of their practices. However, these theories are not as holistic as Social Cognitive Theory which considered the dynamic interplay of individuals, groups, and environmental influences. Hence, we consider how these three factors can influence each other and can be used to promote practice meditation. We use this app as a facilitator that make practicing meditation more easier. Here are some constructs we adopted in our design.

- Social Cognitive Theory (SCT)

- Psychological determinants of behavior:
  ① Outcome expectations: beliefs about the likelihood and value of the consequences of behavioral choices. Our app would like to convey the belief that there is no shortcut to improve their health by meditation. In contrast, continuing meditating can genuinely make well-being better. By delivering such foresight, we can increase their capacity to visualize and work toward distant goals while discounting immediate costs and ignoring the short-term benefits of alternative actions.
  ② Self-efficacy

Elements	Description	Design
Mastery experience	Enabling the person to succeed in attainable but increasingly challenging performances of desired behaviors.	In the beginning, user will start meditating from basic courses and only need to practice for five minutes a day. Gradually, they will be asked to longer courses, it might be 7, 10, 13 minutes and so forth. And they will practice more meditation skills with gradual progression.
Social modeling	Showing the person that others like themselves can do it.	In this way, users can visit other people's planet to view their profile (if they are willing to share) and choose whether to connect with them to have a further conversation.
Verbal persuasion	Telling the person that he or she can do it.	We will giving users meaningful and motivating messages which include the personal information, such as the the improvement of sleep pattern, to encourage people to keep going.

- Environmental determinants of behavior:
  ① Incentive motivation:
  - We provide positive reinforcement to motivate users to keep practicing. When they complete the course, they'll get crystals which they can exchange some products in the app. Moreover, when they attain a certain level, their planet will upgrade, and they'll have more options of materials to built their planet.

② Self-regulation:

Elements	Description	Design
Self-monitoring	The systematic observation of one's own behavior.	Presenting users' progression with visualized data. In this way, they can track their daily progression and have a look of the attainment. Also, when user cannot practice meditation, they can keep simple records of the reason, which enables users to identify and begin to develop coping skills
Goal-setting	Creating small attainable goals to help individuals begin new behaviors and keep commitment.	Users can set a short-term and a long-term goal for themselves in the very beginning. And the system will recommend the courses to users according to their goals and their daily progression. In this way, gradual steps can be achieve more easily to enhance users' self-efficacy.
Feedback	Information about the quantity and qualitative of the behavior being learned, as provided by others and gleaned from the person's own observation.	Utilizing wearable devices to track users' bio physiological index, such as sleep pattern and Heart Rate Variability (HRV) to help users know how well their health improve because of meditation.
Self-reward	Short-term and frequent rewards that people give themselves may be more effective than rewards that may occur in the distant future.	Whenever the user complete a meditation courses, we will gave her/him crystals, which they can use to exchange materials to construct their planet. They can choose when to use that money. Also, while leveling up, they have more options of materials to built their planet.

Enlistment of social support	It can be achieved when a person finds people who encourage her efforts to exert self-control.	We found that although existing meditation apps have function of reminder, users still tend to ignore the notification. One of the functions of social networks—companionship—can encourage users' effort to exert self-control. We design a function that users can invite their friends or be invited to practice meditation at the same time (remote).