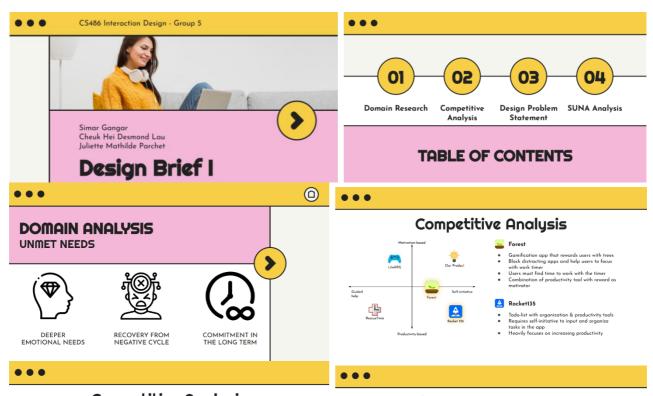


Design Brief I: Domain Research and Problem Statement **Design**



Competitive Analysis



- Uses activity tracker to analyse wasted time
 Block distracting apps and help users to focus
 with work timer
 Guides the user through time-saving and
 focusing
 Heavily focuses on increasing productivity

LifeRPG

- Gamified app that turns user goals into raleplaying-games style missions and quests Finishing tasks grants users XP to level up and rewards badges
 Uses gamified rewards to motivate
 Guided-help in the form of progress tracking and task organization.

Design Problem Statement

Insign:

Procrostination is linked to underlying emotional issues (like stress, fear of failure, low self-efficacy,...), that may be innate or linked to daunting and overwhelming tasks, and can create a negative feedback loop. Most apps use organization tools to tackle procrostination but rarely try to address the emotional issues behind it. They also do not take into account the different personas of procrastinators and present an all-around approach to tackle the issue

A college student who procrastinates as a bad habit needs a personalized app to help them detect and deal with the emotions that make them procrastinate because procrastination often takes root more in emotional issues than in organizational issues.

SUNA Analysis

personalized help to different procrastinator personas

- Tracking tools
 Behavioral data tools
 NLP generative tools

Most college students these days use both a smartphone and a laptop for their work

RESOURCES

- S. Juan Francisco Diaz-Moroles, Joseph R. Cohen, Joseph R. Ferrori, An integrated view of personality styles related to avoidant procrossitionism, Personality and Individual Differences, Volume 45, Issue 6, 2008, Pages 554-558, ISSN 0191-8869, https://doi.org/10.1016/j.jpsid.2006.0018.
- 7: Flett, G.L., Stainton, M., Hewitt, P.L. et al. Procrastination Automatic Thoughts as a Personality Construct: An Analysis of the Procrastinatory Cognitions Inventory. J. Rat-Emo Cognitive Behav Ther 30, 223–236 (2012). https://doi.org/10.1007/s10942-012-0130-z



Design Brief II: Semi-Structured User Interview and Observation & User Modeling

1. Overarching questions

- Are users aware of why they procrastinate and how it affects their work?
- What are the reasons that these individuals want to quit procrastinating?
- What emotions do people experience when they procrastinate vs after?
- Is the link between fear and procrastination apparent for users? If not fear, what other motive could lead them to procrastinate?
- How do users currently cope with fears related to their work?
- What strategies do users currently use to increase productivity or to deal with procrastination? Are they actively trying to change their habits? Do they do these changes alone or have someone accompanying them?
- How long does it take for them to implement these new habits?
- Do users try many apps at the same time or stick to one solution?
- Can our solution help them (is targeting underlying negative emotions the optimal approach)?

These are the questions that we aim to answer during the interviews (but not the answer asked during the interviews. For the complete IO guide used during the interview, please refer to the document "IO guide – groupe 5.pdf").



2. What are some of the Ideas you have developed to recruit and interview users?

Find bellow our persona table of college student procrastinator in the academic field.

	Name	Persona	Demographics	Relevant characteristics	Why we interview them
1	Kenneth		19 years old, male	Tech geek, Organized, ex-procrastinator	Non-user, but can learn from him
2	James		21 years old, male	Habitual procrastinator, chronic stress	Male potential user with typical behavior patterns
3	Anna		20 years old, Female	Chronically stressed Highly unorganized Seeks the thrill in chasing last minute deadline but wants to change this habit	Potential user who can be interviewed to understand the motivations behind the will to stop procrastinating
4	Jojo		20 years old, Female	Like to work on topics that interest her Lacks self-discipline when it comes to things she doesn't like to do	Potential user who can be used to validate our DPS to understand if users actually perceive that emotions are catalysts to procrastinating

I tried to find 3 interviewees who had diverse personalities, and in the end I interviewed one James, one Anna and one Jojo (see section 3). I recruited these interviewees among my acquaintances, as they perfectly fitted the college student procrastinator description, and all had different personas. I also found that interviewing people I already met before increased the benefit from the interview, because they were very comfortable around me, and I could feel the things they didn't say out loud during the interview (important when talking about sensitive subject such as personal emotions).

Before starting the interviews (set up in places where they usually work/procrastinate), I got them a coffee and a sweet (not for the person interviewed by Discord) and took around 10 minutes to explain to them what to



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expect, how their data was handled, and that if they felt uncomfortable they could at any time stop the interview.

3. The setup of your interviews

Interviewee	Persona (Unique characteristics)	Demographics	Why are we interviewing them ?
Desmond interviewee 1	 Hard working Tech geek, expert in organizational productivity tools Relies on digital tools in many aspects of his day to day workflow Used to procrastinate as a habit but not anymore 	Age: 20 Bachelor student, Computer Science + Business HongKonger 21st april 11:00 Student hall study room	Probably non user, but learn from them how they got over procrastinator Learn about their workflows with existing organizational tools and validate if emotional mediation is the correct approach
Desmond interviewee 2	 Competitive, really prioritize getting good grades Chronic stress, but now lives with it and uses stress and fear as a motivator Good at dealing with stress Very unorganized Chronic procrastinator 	Age: 20 Bachelor student, Civil Engineering + Business HongKonger 22nd April 16:00 Zoom (student hall)	Learn about the workflow of a chronic procrastinator and their goals and tasks Learn if a user who deals with stress on a day to day basis can benefit from a solution that mediates emotions
Juliette interviewee 1 Closest persona: Jojo	 Hard working + efficient worker Likes to work Motivation closely related to the specifics of their tasks and how they react emotionally to them (chance of success, interest, novelty, colleagues,) Emotions easily swayed (easily decrease of self-esteem, self-efficacy) Bad at dealing with stress Quite self-disciplined Reluctant to think of digital tools as solution to procrastination habits Music listener 	Age: 23 yo PhD student IA field French Male Interviewed at a Coffee shop in which the interviewee spends lots of time Date of interview: 20th of April	A person whose emotions are strongly linked with work, and with their procrastination habits. Very likely user if App could help regulate and sooth negative emotions linked to the nature of the work
Juliette interviewee 2 Closest persona: Anna	 Hard working + efficient worker (when working) Confident in their abilities to work Lack motivation to start working Increased stress and anxiety when thinking unable to finish tasks in time Subject to guilt, subject to social pressure No self-disciplined Music listener Eager to think of digital tools as solution to procrastination habits Don't like to waste time using for too long an App 	Age: 22 yo Bachelor student Computer Science French Male Interviewed in learning area at EPFL in which the interviewee spends lots of time Date of interview: 20th of April	A person whose emotions (motivation, stress, anxiety) are linked to deadlines Likely user if App could help with dealing with negative emotions linked to deadlines, social pressure.
Juliette interviewee 3	 Confident in their ability to work, efficient, happy and proud worker when they get to it Like their work but prefers to have a very busy social life, like to interact with people 	Age: 23 yo Bachelor student Architecture Swiss	A person subject to many emotions when working/procrastinating Likely user if App could help deal with negative emotions and emphasis on the



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Closest persona: James	 When procrastinating, do things they really enjoy (friends, hobby,) Subject to social pressure Easily swayed emotions Fear, anger, stress, guilt and exhaustion from working and worrying (deadlines) Feels like negative emotions are a necessary process to get to work, but would like to feel less negative emotions with the same academic results Like to plan their work but don't respect plans (not very self-disciplined) Eager to think of digital tools as solution to procrastination habits 	Male Interviewed via a learning tool: Discord (each of us was at a place where we usually work) Date of interview: 25th of April	positive feelings associated with a good work and getting ahead of deadlines (that immediate pleasure from procrastinating and doing things they like could be balanced by the positive feelings of good work, and the avoidance of the negative feelings which come with procrastination)
Simar interviewee 1	 Has ADHD,Anxiety Thoroughly immersed in things that they like Not organized at all Have a hard time organizing Perfectionist Thrive on stress Is very social 	Age: 20 Student: MATH+ECON INDIAN Date: 21st April 4pm Online	Because of emotional related issues I felt we could validate our DPS She is a perfectionist in the things that she really likes Doesn't really like her major and is pushed to do things that are not in her long-term interest She also has a very short attention span and switches between a lot of tasks and feels like some other form of work is her form of procrastinating
Simar interviewee 2	 Like to maintain a good work-life balance Really enjoy learning new things about their major Work efficiently on things that they really like Are partially social 	Age :20 Student: CHEM VIETNAMESE Date: 22ND April 10pm Online	She has a good work-life balance and doesn't procrastinate a lot

See from the table above all our 7 interviewees, and in **bold** my 3 interviewees.

As a team, we decided to design our product for people experiencing negative emotions (fear and acute stress) from their procrastination habit, and not for people having (or seeming to have) organizational issues (like interviewee 1 and 2 from Desmond for example). We also decided to exclude people with mental issues (such as interviewee 1 of Simar), because we don't want to dive into a medical-related App.

(I did not include my personal notes that I took during my 3 interviews, as it was not asked in the grading rubric. However I have them, so in case you need them, I can hand them over).

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4. Post interview analysis of results

- 1) I was surprised to see a strong aversion for gamification features for my 3 interviewees. They did not like the idea of rewards at all, felt it was vain and a waste of their time. However, for the 3 of them, having a supportive and positive App was really a good point, not something that would add some stress or would be too time consuming, but something encouraging, that would congratulate them.
- 2) I was also surprise to see the strong level of awareness of the procrastination habit in each of the 3 interviewees, they seemed really conscious about their procrastination habits, at the time they procrastinate and afterwards. So a tool to help you realize how much time was spent procrastinating does not seem like a good solution for my 3 interviewees. Also I was surprise to find that 1 of my interviewee found it legitimate to procrastinate and did not seem to see it as an issue for him (the issue lied in the fact that this person experienced negative emotion during their procrastination time, but not in the procrastination itself).
- 3) I was pleasantly surprise to see such a strong emotional link between procrastination and work for my 3 interviewees. They genuinely liked their academic field, the tasks that they had to do and the act of working, but procrastinated nevertheless to **start** the work due to different emotions (dominated by feeling overconfident at first, then fear to no being able to finish in time, anger at oneself, decrease of self-confident, increase of guilt,...). For my 3 interviewees (it went differently for my teammates interviews), it strongly corroborates with our viewpoint that organization is not the issue that induces procrastination, but emotions are. They were favorable to an App to help regulate, mediate and reduce the negative emotions linked to procrastination, even if they had difficulties to picture such an App.



Design Brief III: Context Scenario

1. User Context and Product Usage Report

1.1. Product Usage Setting

The product will be used in a low-effort environment designed for users with minimal motivation. The goal is to require as little effort as possible to open and navigate the App, particularly during initial use.

1.2. Duration of Use

- Core Feature (Interactive Discussion): Short sessions but used regularly, especially around work or study deadlines.
- Additional Feature (Virtual Study Buddy): May be used for extended periods during a single session

1.3. Frequency of Interruptions

At first, users may be frequently interrupted. However, the App is designed to help them enter a focused "working zone," ideally reducing interruptions over time.

1.4. Collaboration and User Involvement

The experience is individual—no collaboration or multi-user interaction is required.

1.5. Related Product Ecosystem

The App may be used in combination with:

- A to-do list application (digital or paper).
- A music app such as Spotify to enhance focus or relaxation.

1.6. Key User Activities

To achieve their goals, users must:

- 1. Communicate their emotions with the virtual discussion partner to reduce negative feelings and enhance positive ones.
- 2. Transition into work mode and begin their tasks productively.

1.7. Expected Outcomes

- Reduction in procrastination.
- Improvement in focus and working efficiency.



1.8. Acceptable Level of Complexity

The App should maintain very low complexity. It must be intuitive and easy to use, encouraging engagement without cognitive strain.

2. Psychological and Behavioral Framework

2.1. Psychological Insights on Procrastination

"You can do all the time-management skills in the world with someone, but if you haven't addressed the underlying irrational beliefs fueling the anxiety, which is why they're procrastinating, they're not going to do [the task they are avoiding],"

— Cilley, ACA member specializing in anxiety disorders

2.2. General Steps to Reduce Fear

- Understand what is causing the fear.
- Put fear into perspective.
- Set realistic expectations for the future.

2.3. Cognitive Behavioral Therapy (CBT) Framework

Purpose:

CBT emphasizes helping individuals become their own therapists through structured exercises and self-reflection, both during and outside of sessions.

Core Principles:

- Psychological problems are partly based on unhelpful or distorted thinking patterns.
- Psychological problems often stem from learned patterns of unhelpful behavior.
- People can learn better coping methods, relieve symptoms, and function more effectively.

Techniques:

- Recognizing and reevaluating cognitive distortions.
- Developing problem-solving skills.
- Building confidence in one's abilities.
- Facing fears rather than avoiding them.
- Learning to calm the mind and relax the body.

2.4. Four Core Irrational Beliefs (REBT Framework)

- 1. **Demands:** "Should" and "must" statements (e.g., "I should go to the gym four times a week").
- 2. **Awfulizing:** Imagining a situation as the worst possible outcome.
- 3. Low Frustration Tolerance: Belief that the struggle is unbearable ("I can't stand this").
- 4. **Self-Downing:** Defining oneself by a single failure (e.g., "If I mess up one project, I'm a failure").

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2.5. **Behavioral Techniques**

Urge-Procrastination Method:

Clients are instructed to pause when they feel the urge to procrastinate and observe the sensations and thoughts that accompany it.

Example: feeling the urge to grab a snack instead of working \rightarrow recognize it, sit with the discomfort, and choose action over avoidance.

Reducing Shame and Self-Criticism:

Encouraging self-compassion and replacing critical inner dialogue with supportive language.

Example: Changing "I'm lazy for not going to the gym" \rightarrow "It feels good when I move my body."

Self-Forgiveness Strategy:

A 2010 study found that students who forgave themselves for previous procrastination were less likely to

Forgiveness reduces guilt and promotes adaptive behavior change.

Source: Pretend Paper – University of Texas Law Study, 2010

2.6. **Common Psychological Reasons for Procrastination**

Reason 1: Awfulizing and Low Frustration Tolerance

People exaggerate how hard a task will be and underestimate their ability to cope.

"When people think something will be too difficult, they don't do it." — Cillev

Reason 2: Fear of Failure and Self-Labeling

Failure becomes tied to self-worth.

Example dialogue:

- "I'm afraid I'll respond incorrectly to emails."
- "My boss would think I'm an idiot."
- "That means I'm a bad employee."

This internal labeling reinforces procrastination.

Reason 3: Avoidance of Discomfort

People procrastinate to escape emotional discomfort—fear, stress, or anxiety.

Technique: "Name it to tame it."

- Identify physical sensations (e.g., tightness in chest).
- Practice coping tools like deep breathing.
- Challenge irrational thoughts and replace them with balanced ones.
- Mentally rehearse the avoided scenario to reduce fear.

Applied Example 2.7.

Scenario:

A client procrastinates writing an article.

Therapist's approach:

- Ask the client to visualize sitting at the desk, staring at the blank screen.
- Explore emotional and physical sensations.
- Identify underlying thoughts ("I can't do this," "It'll be terrible").
- Apply CBT techniques to reframe and proceed.



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Source: Counseling Today - "Procrastination: An Emotional Struggle," 2019

3. Summary

The insights above directly inform the App's behavioral design:

- Integrating gentle cognitive reframing and emotional awareness tools can reduce avoidance.
- Encouraging **self-compassion and micro-progress** aligns with evidence-based therapy for overcoming procrastination.
- The App should act as both **motivational support** and **emotional grounding companion**, helping users understand and change the thinking patterns that fuel their avoidance behaviors.