



**CCPROG1 AY 2023 – 2024 1<sup>st</sup> Term MP Specifications**  
**“Persona 5 – Text-Based” [1]**



# Persona 5 - Text Based




In this project, you will create a text-based game where users will play as a 3<sup>rd</sup> year high school student at Shujin Academy named Ren Amamiya. In the game, Ren is currently being interrogated for a crime he did not commit. The game's overarching theme is Ren recalling the events that happened 60 days prior to the event(s) which led to his arrest.

At the start of the game, Ren is being questioned by an investigator who is trying to find evidence that he is guilty for a crime that he was merely a witness of. As a result, Ren is forced to remember the previous 60 days that occurred before he was arrested for the so-called crime. During interrogation, Ren insists that he is innocent and spent the previous 60 days living a normal high school student's life which includes building up his social stats and improving his

personal relationship with peers around him. It is up to players to help Ren prove his innocence by playing as Ren for 60 days prior to his arrest.

Ren's flashback begins as he returns to Tokyo and begins remedial classes preparing for his college entrance exams by attending classes at Shujin Academy every Mondays to Fridays. How Ren spends his days will be up to the players.

### Character Profile(s)

	<p>Name: <b>Ren Amamiya</b></p> <p>Ren is currently a Third Year high school student who has returned to Tokyo to take up remedial classes to help him prepare for his college entrance exams. He aims to live the life of a normal high school student and to get into a good prestigious university.</p>
<div data-bbox="316 993 667 1377"></div> <p>(Morgana in his current cat form)</p> <div data-bbox="358 1444 628 1787"></div> <p>(Morgana's Metaverse appearance)</p>	<p>Name: <b>Morgana</b></p> <p>Morgana is a being of unknown origin who was created to be humanity's hope. He is currently in the form of a cat, despite his insistence that he is not a cat. He is understood by individuals who have been to the metaverse (a.k.a the Phantom Thieves) but for the others, he merely sounds as if he is meowing and purring instead of speaking.</p> <p>He acts as Ren's voice of reason and travels along with him in his bag wherever he goes. He is very fond of sushi and has a one-sided infatuation on Ann Takamaki, who he affectionately calls "Lady Ann".</p>

## I. Gameplay duration:

The game begins on September 1, year 20XX and ends on October 31, 20XX which is the day Ren witnesses the said crime occur and ends up being arrested as the “primary” suspect due to the main perpetrator being someone with a lot of influence. This means that players will have exactly 60 in-game days to satisfy the game’s objective.

Refer to the calendar in the following image to indicate the specific days and dates the game will be taking place.

### September 20xx

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

### October 20xx

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31 		

*Map of the game. Ren arrives in Tokyo at September 1, 20XX and his last day to accomplish his tasks is October 30, 20XX. He witnesses the crime take place on October 31, 20XX*

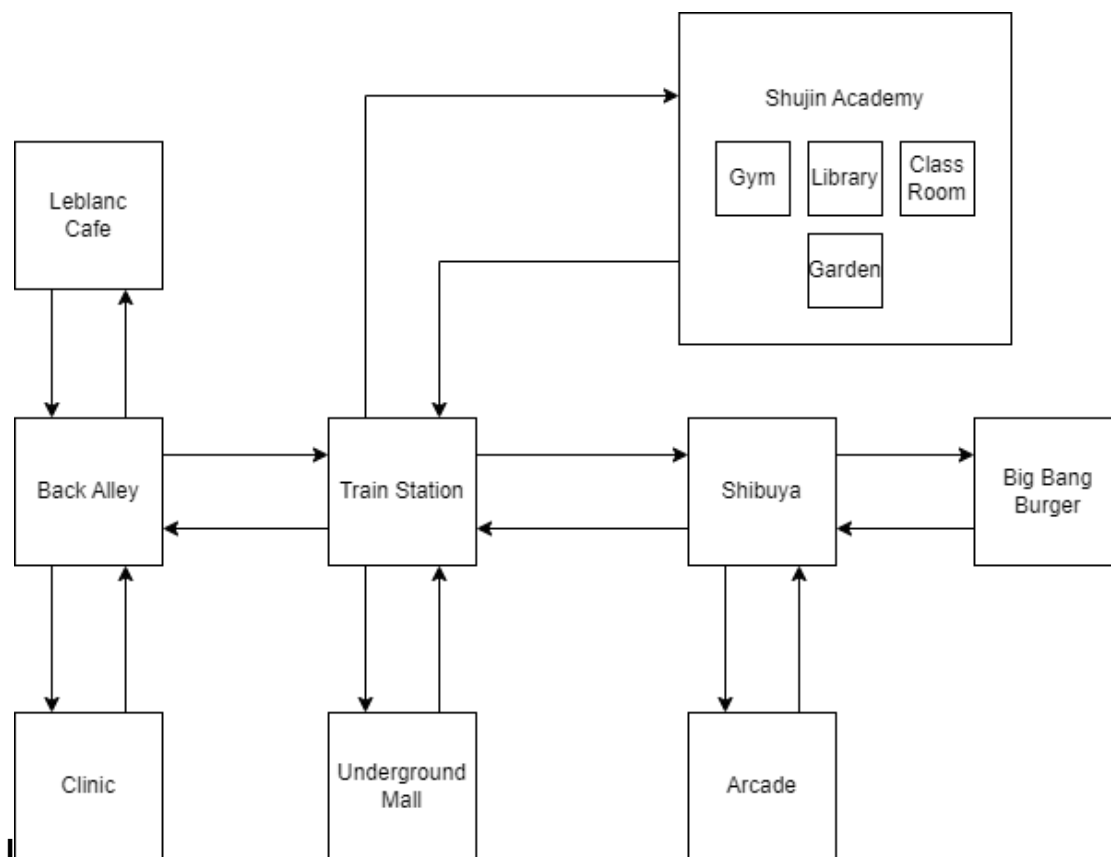
## II. Gameplay objectives:

Within the span of 60 days, players must use their time wisely in increasing their social stats and building up their relationship with the different confidants available. The relationship with these confidants is key to proving Ren's innocence and winning the game. At the end of 60 days, various endings may possibly occur depending on how many confidants have been maxed out. See section VIII for the list of endings and requirements for each.

## III. Game Setting / Map

During the game's duration, the player is able to guide Ren to travel to different settings. Ren is able to travel from one location to another, provided that location is adjacent to the said location (e.g: Ren can travel from the Back Alley to the Train Station and vice-versa but not Big Bang Burger. In order for Ren to reach Big Bang Burger, he has to go through the Train Station, then Shibuya, then Big Bang Burger).

However, once they are at Shujin Academy, Ren is able to travel from one area within the campus to another freely, provided their next destination is also within the campus.



*Map Overview of the Game. The setting covers Yongen-Jaya, Shibuya, and Shujin Academy*

## IV. Gameplay Mechanics

Each day will consist of two periods, namely the Afternoon and the Evening. Depending on Ren's location and the current period, certain activities will be available to the player. When Ren is at a certain location, he may either:

- 1.) Perform an activity
- 2.) Go Shopping (If applicable)
- 3.) Travel to an adjacent area

A clearer description of what each activity that can be done per location is indicated at a later section, specifically **Appendix B. Activity Map**. The following sections give a clearer description on what each section corresponds to:

### **Perform an Activity**

An activity can either be performing a task that will raise a social skill level, earning money OR spending time with a confidant that is available within the location. Performing activities WILL advance time, meaning that an activity performed in the afternoon will cause time to progress to evening while performing an activity in the evening causes time to advance to the next day.

After performing an activity in the afternoon, Ren will “automatically” return to LeBlanc Café. However, he is still free to travel to different areas, provided they are available to travel to at night (more on this later on).

### **Go Shopping**

Some locations (ex: Underground Mall, Big Bang Burger) allow Ren to purchase some items that he can use on himself or as gifts to confidants. Shopping will require Ren to have money on hand. Shopping does NOT cause time to advance

### **Travel to an adjacent area**

As mentioned in the previous area, Ren is able to travel to an adjacent area as indicated in the map. Travelling does NOT cause time to advance. There are certain areas that are inaccessible at night, particularly **Shujin Academy**, which is NOT available on evenings and Sundays.

## V. Starting Point each Day

Immediately after an activity is performed on the evening, Ren automatically goes back to LeBlanc Café to sleep and advance to the next day. Ren's starting point depends on the current day of the week.

On weekdays (Mondays – Fridays), Ren spends the morning having classes to prepare for his college entrance exams, so his starting point is the classroom at **Shujin Academy**.

On weekends (Saturday & Sunday), Ren spends the morning helping out Sojiro in the café and studying on his own, so his starting point is **LeBlanc Café**.

## VI. Social Stats

Social Stats are the main key points that are required to be able to unlock certain confidants. A confidant is considered available once Ren satisfies the minimum social stat requirements of a particular confidant as indicated in the Confidant Information Sheet. The following are the social stats that Ren will be required to work on:

**Kindness** – Signifies Ren's ability to empathize and perform charitable tasks.

**Guts** – Signifies Ren's ability to take risks and perform daunting tasks.

**Intelligence** – Signifies Ren's ability to comprehend complicated situations and score well in exams.

At the start of the game, Ren's level for each stat starts at Level 0, with Level 3 being considered as the MAX Level. To obtain a Level, Ren needs to earn "points" for a particular social stat.

**Level 1** = 4 points required

**Level 2** = 8 points required from Level 1 (Total of 12 points.)

**Level 3** = 10 points required from Level 2 (Total of 22 points.)

Earning points for a stat can be done by performing activities or consuming certain items. Spending time with some confidants can randomly give points for stats as well. Once Ren reaches the MAX Level for a certain stat, he no longer earns points for that particular stat.

## **VII. Confidants**

Confidants are individuals that Ren has formed a personal connection with in the past. These individuals will play a major role in determining the ending Ren receives at the end of the game.

At the start of the game, all Confidants begin at Level 0. However, when a player unlocks a confidant, they automatically progress to Level 1 with that confidant. A confidant is considered “unlocked” when they satisfy the social stats required AND visit the said location of that confidant when they are available. Doing so will trigger the “unlock” event of that certain confidant and will enable them to be selectable.

When Ren travels to a location and a confidant is available, they will greet and say hi to Ren, and the option to spend time with the confidant should be selectable as one of the activities possible in the said location.

### **Levelling up Confidants**

Spending time with Confidants allow Ren to earn points towards levelling up that Confidant. A Confidant “levels up” when enough points are earned towards their confidant level. Upon reaching enough points to level up to the maximum level, Ren must wait until the next time the confidant is available and trigger the “Maximum Level” event with the confidant by spending time with them one more time. Only then will the confidant reach their MAX level.

Spending time with Confidants is the quickest way to level them up. Each time spent with a certain confidant will earn you 2 points with that particular confidant. Another way is to buy a gift and present it to a confidant. Giving a confidant a gift will allow you to earn 3 points with them without having to spend time with them. Do note that you are only able to gift a respective confidant only once (Meaning, if you’ve gifted Confidant A something, you are not allowed to give them another gift for the duration of the playthrough, but you are free to give other confidants that have yet to receive a gift). Likewise, giving a confidant a gift makes them unavailable for the rest of the day.

Points that are required to level up a confidant:

**Level 1** = N/A. Confidants begin at Level 1 upon unlocking them

**Level 2** = 7 points required from Level 1

**Level 3** = 10 points from Level 2 (For a total of 17 points). Level 3 unlocks the MAX Event of that confidant

**MAX Level** = MAX Event Completed.

## VIII. Endings

**Perfect Ending:** All confidants are seen being interviewed separately and insisting his innocence. The scene cuts to the interrogation room where Ren's defense attorney named Sae Nijima appears and provides papers ordering Ren's release and absolving him off the crime and anything related to it. He is then accompanied by Sae back to LeBlanc before being greeted by all confidants. The end shows everyone celebrating in a (belated) Halloween party at LeBlanc Cafe with all confidants in attendance. **This ending is achievable by obtaining a MAX Level relationship with all 10 confidants.**

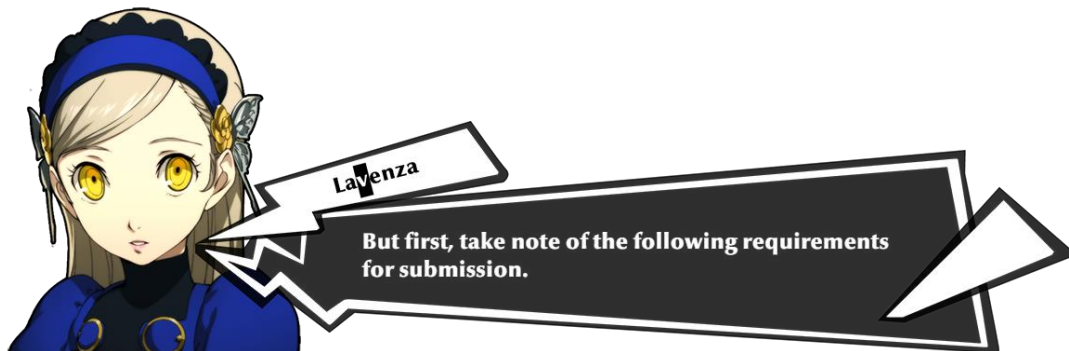
**Good Ending:** Ren is innocent and is set free due to insufficient evidence. Confidants who have reached a MAX Level relationship all greet him as he arrives at LeBlanc Café. A small and simple dinner occurs with all confidants enjoying Sojiro's special curry and (if Futaba was maxed out) Turkey. **This ending is obtained by obtaining a MAX Level relationship with at least 7 confidants.**

**Neutral Ending:** Ren is deemed innocent due to insufficient evidence but the interrogator receives a phone call from an unknown individual, who then concludes that Ren will be placed under probation. As he is released, he returns with Sojiro back into LeBlanc Café. The confidants who have reached a MAX Level call him to check how he is doing and wish him well. **This ending is obtained by obtaining a MAX Level relationship with at least 4 confidants.**

**Bad Ending:** Ren is planted with false evidence and is forced into admitting that he committed the crime. He ends up being sent to prison and is seen spending time there, waiting for his hearing. (If Makoto was maxed out) He then receives a phone call from his defense attorney named Sae Nijima who vows to have him released. **This ending is obtained if less than 4 confidants end up reaching a MAX relationship.**



# Requirements c/o Lavenza



- 1.) Students must implement the following project in C
- 2.) Lessons discussed during CCPROG1 should be applied in creating this project
- 3.) Students must create at least **5** functions (excluding the main and functions used to draw the user interface). These functions must be called properly.
- 4.) **No global variables allowed**. You must find a way to get other functions to communicate with each other by passing the correct parameters / pointers.
- 5.) **break** is only allowed in switch statements and not in loops. At the same time, you are **not** allowed to use **goto** and **continue** as well as calling the function **main()** anywhere within your functions. **Embedded assembly language codes are also strictly prohibited.**
- 6.) Do not forget to include internal documentation (comments). At the very least, there is an introductory comment and a comment before every function.
- 7.) You may implement statements and functions not taught in class (as long as they comply with the requirements above). Using libraries (IE: Allegro, DirectX) and advanced topics (arrays, strings, structures) is permitted as long as they compile in

- the G306B computer laboratories. Note that doing such may not necessarily merit additional points.
- 8.) Submission of the project is due on November 28, 2023 (Tuesday) 7:59 AM to be done via canvas

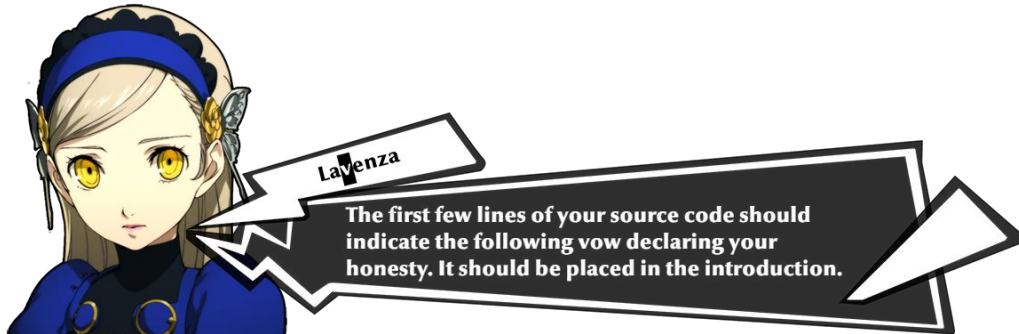


## Checklist:

- Upload in AnimoSpace by clicking **Submit Assignment** on Machine Project and adding the following files:
  - **source code (1)**
  - **test script (2)**

email the softcopies of everything as attachments to **YOUR own email address** (ex: [ren.amamiya@dlsu.edu.ph](mailto:ren.amamiya@dlsu.edu.ph)) on or before the deadline

## Source Code



```

/*****
I am thou, and thou art I.
Thou has acquired a new vow.

It shall become the wings of rebellion
that breaketh thy chains of captivity.

With the birth of the CCPROG1 Persona,
I have obtained the winds of blessing
that shall lead to freedom and new power.

I pledge that this power will result in my own work, based on my
personal efforts in studying and applying the concepts learned.

I have constructed the functions and their respective algorithms and
corresponding code by myself, formed from my own bonds.

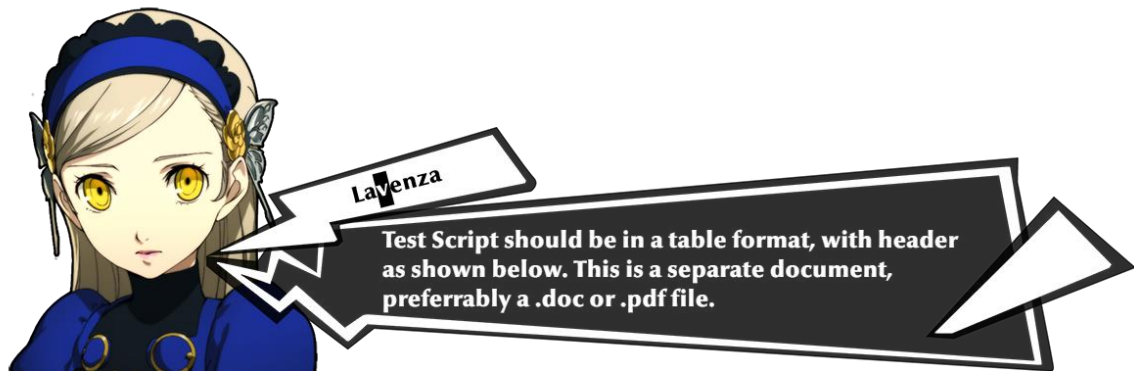
The program was run, tested, and debugged by my own efforts.

I further certify that I have not copied in part or whole or otherwise
plagiarized the work of other students, persons, and/or personas.

The bond with this CCPROG1 persona is my own.

                                <your full name>, DLSU ID# <number>
*****/
```

## Test Script



There should be **at least 3 distinct test cases** (as indicated in the description) **per function**. There is no need to create test scripts for functions that only perform displaying on screen.

Example only:

Function Name	#	Test Description	Sample Input (either from the user or to the function)	Expected Result	Actual Result	P/F
canSpendTimeWithFutaba()	1	User tries to hang out with Futaba without her being unlocked	futabaUnlocked = 0, nDay = 4	...	...	
	2	...				
	3					

Test descriptions are supposed to be unique and should indicate classes/groups of test cases on what is being tested. Given the function **canSpendTimeWithFutaba()**, the following are 3 distinct classes of tests:

- i.) Testing when Futaba is available but the user has not yet unlocked her
- ii.) Testing when you've met the minimum stat requirements, but you haven't unlocked her yet
- iii.) Testing when the day is when Futaba is not available but the user has unlocked her

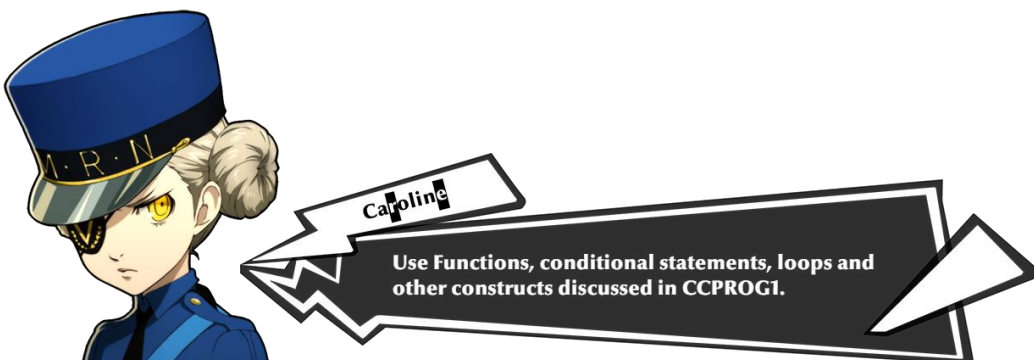
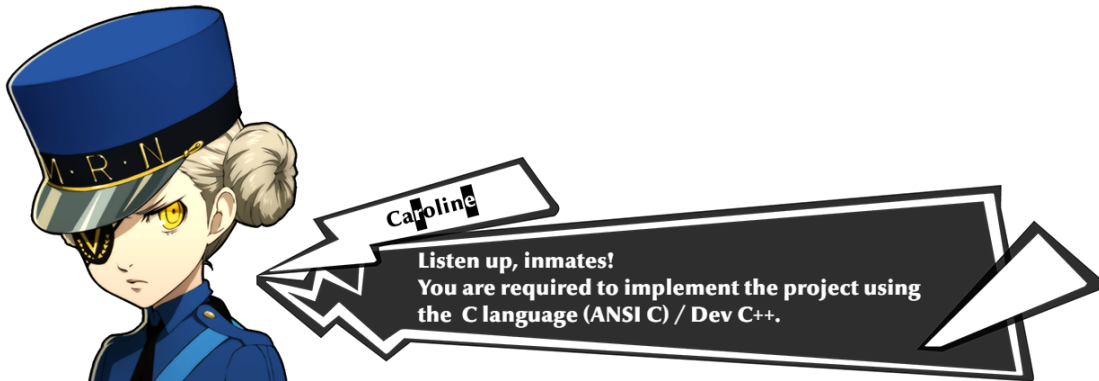
The following test descriptions are incorrectly formed:

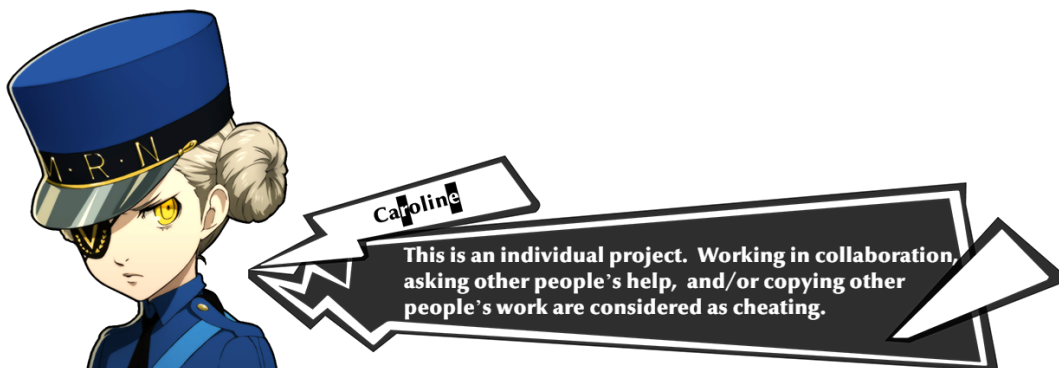
Too specific: Testing with futabaUnlocked = 1 and nDay = 4

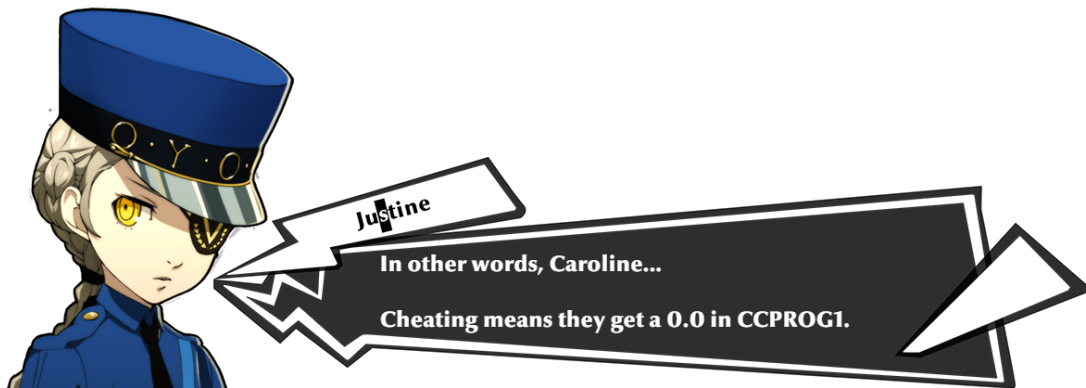
Too general: Testing if user can spend time with Futaba

Not necessary -- since already defined in pre-condition: testing if futabaUnlocked = -1 or nDay = -1

## Important Points to Remember c/o Caroline & Justine:









## Rubrics c/o Lavenza:



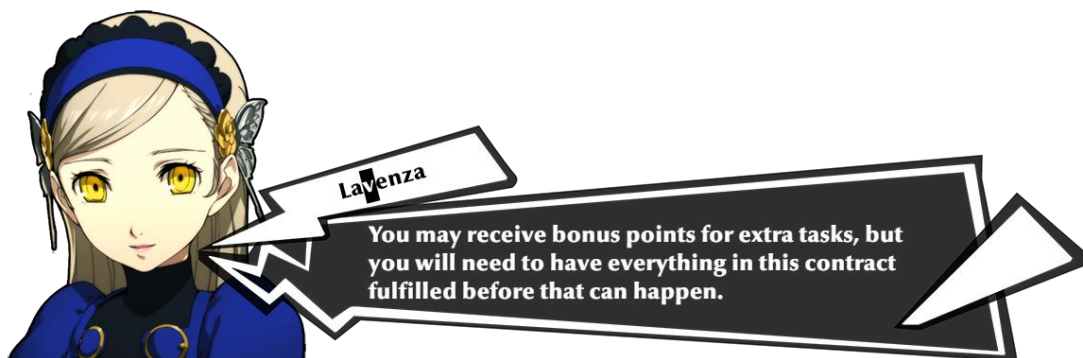
### CCPROG1 MP

Criteria	Ratings					Pts
Program Correctness	<b>75 to &gt;40.0 pts Exemplary</b> The application meets all the requirements specified in the project specification. The code is syntactically and logically correctly for all cases. Implementation of the program follows the indicated guidelines and does not violate indicated restrictions. The implementation also exhibits appropriate use of programming constructs.	<b>40 to &gt;25.0 pts Satisfactory</b> The code works for typical input, but fails for minor special cases; the major requirements are met, though some minor ones are not. Some implementation of the program violates indicated restrictions.	<b>25 to &gt;10.0 pts Developing</b> The code sometimes fails for typical input. Many parts of the program implementation violate indicated restrictions and some parts of the solution are not implemented using appropriate programming constructs.	<b>10 to &gt;0.0 pts Beginning</b> The code often fails, even for typical input. Most indicated restrictions were violated. Note: Program that does not run and /or implemented incorrectly (based on specifications and restrictions) automatically gets 0 for this course output.	<b>0 pts No submission or did not compile successfully</b>	75 pts
Readability	<b>10 to &gt;8.0 pts Exemplary</b> The program conforms to a coding standard that promotes code readability. Internal documentation is comprehensive. Note: See references for some relevant information on code readability.	<b>8 to &gt;5.0 pts Satisfactory</b> Minor code formatting does not exhibit consistency in coding standard. Not all functions / program features have proper internal documentation.	<b>5 to &gt;0.0 pts Developing</b> Minimal internal documentation and code readability.	<b>0 pts Beginning or None</b> No internal documentation and code is not readable.		10 pts



Effective Communication / Concept Understanding	<b>5 to &gt;3.0 pts Exemplary</b> Answers to questions are correct, reasonable, and reflective of the code. The justifications provided are sound.	<b>3 to &gt;2.0 pts Satisfactory</b> Answers to questions are correct, but some justifications provided are weak.	<b>2 to &gt;1.0 pts Developing</b> Answers to questions are correct, but cannot justify solution (e.g., solution via trial and error, rather than proper understanding and application of concepts).	<b>1 to &gt;0 pts Beginning</b> Correct understanding of the problem, but was unable to explain workings of code provided. Note: Failure to explain and justify workings of the code submitted will automatically merit 0 for this course output.	5 pts	
Test Cases	<b>10 to &gt;8.0 pts Exemplary</b> All test cases are indicated correctly and completely with correctly formed descriptions.	<b>8 to &gt;5.0 pts Satisfactory</b> All test cases are indicated correctly but some results are incomplete or missing, or some descriptions are general, or some cases are missing.		<b>5 to &gt;0.0 pts Developing</b> Test cases are indicated but most cases are missing, or results of most cases are missing, or descriptions are too general.	<b>0 pts Beginning or None</b> No test case document submitted.	10 pts
Bonus	<b>10 to &gt;0.0 pts Bonus features</b>		<b>0 pts</b> No bonus feature implemented		10 pts	
Total Points: 110						

## BONUS POINTS:



A maximum of 10 points may be given for additional features not included in the specifications (IE: Background Music, extra confidants (e.g. Sae Nijima, Hifumi Togo, Goro Akechi, Yuuki Mishima, Chihaya Mifune, etc.), in-class quizzes, random events). Additional points given will be subject to the instructor's evaluation based on the correctness in implementation and the impact to the game play.


**Note:** The maximum score in this rubric for the final MP deliverable is 100 points. An additional 10 points maximum may be given depending on the additional output outlined in the MP specs document. These additional outputs may require advanced reading and understanding of topics that is not covered in the course.

I am **thou**, thou art I...  
Thou hast acquired a **new** vow.


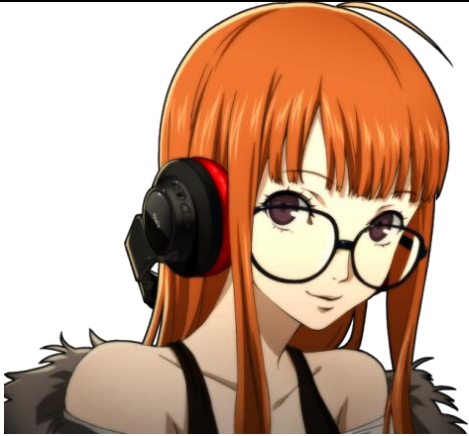

It shall **become** the wings of rebellion  
that **breaketh** thy chains of captivity.

With the **birth** of the CCPROG1 Persona,  
I have obtained the winds of blessing that  
shall lead to **freedom** and new power...




### Appendix A. Confidant(s) information Sheet

Confidant	Information
	<p>Name: <b>Sojiro Sakura</b> Requirements: <b>Available at the start + Unlocked Automatically</b> Location: <b>LeBlanc Café</b> Availability: <b>Wednesday, Saturday, and Sunday (Evening)</b></p> <p>Sojiro is Ren's guardian who watches over him as he attends high school. He works in LeBlanc Café, a place known for its amazing coffee blends and delicious curry. As Ren's guardian, he occasionally asks Ren to help out in the café, particularly in the mornings of the weekends but Ren may have the option to voluntarily help out on the evenings too.</p>

	<p><b>Name: Ryuji Sakamoto</b>  <b>Requirements: Available at the start + Unlocked after classes on September 2, 20XX</b>  <b>Location: Shujin Academy Gym (Weekdays).</b> When unlocked, also <b>Arcade (Saturday)</b>  <b>Availability: Afternoon (Weekdays and Saturday)</b></p> <p>Ryuji is one of Ren's closest friends, who is also a 3<sup>rd</sup> year high school student from Shujin Academy. Ryuji is also a member of the Track Varsity. While academically challenged, he is a very gifted runner who normally hangs out in the Shujin Academy Gym. On weekends, he loves unwinding in the arcade. He is a foodie who is particularly fond of ramen.</p>
	<p><b>Name: Ann Takamaki</b>  <b>Requirements: Level 1 Kindness &amp; Level 1 Guts</b>  <b>Location: Underground Mall (Weekdays)</b>  <b>Availability: Afternoon (Weekdays)</b></p> <p>Ann is a part-time model while being a 3<sup>rd</sup> year high school student from Shujin Academy who can often be found in the underground mall doing some shopping or being photographed for various modelling tasks. She is also academically challenged like Ryuji, but she is determined to excel in whatever she is naturally good at. Despite the need to watch her figure, she is very fond of sweets and desserts, but she dislikes carbonated drinks.</p>
	<p><b>Name: Yusuke Kitagawa</b>  <b>Requirements: Level 1 Intelligence</b>  <b>Location: Train Station (Weekdays)</b>  <b>Availability: Afternoon (Weekdays)</b></p> <p>Yusuke is a 3<sup>rd</sup> year high school student who has a scholarship in Art production and is a naturally talented painter. He is, however, very eccentric and may require a level of critical thinking (which Ren has) to be able to relate to what he says. He is normally seen observing individuals passing by in the Train Station, hoping that he can come up with an inspiration for his next "big art piece" as he claims. Another one of his quirks is his tendency to be financially irresponsible.</p>

	<p>Name: <b>Makoto Niijima</b>  Requirements: <b>Level 2 Intelligence</b>  Location: <b>Shujin Academy Library (Weekdays)</b>.  Availability: <b>Afternoon (Weekdays)</b></p> <p>Makoto was formerly the student council president of Shujin Academy who returns to conduct a research project as part of her college work. She is normally found in the library doing this said project, but she's more than willing to spare time to help Ren further his knowledge and studies when she is available to do so. She is highly fond of crime and mystery thrillers as she has ambitions of becoming a police commissioner one day.</p>
	<p>Name: <b>Futaba Sakura</b>  Requirements: <b>Level 2 Kindness &amp; Level 2 Intelligence</b>  Location: <b>LeBlanc Café</b>  Availability: <b>(Monday, Tuesday, Thursday, Friday) Afternoon</b></p> <p>Futaba is a tech-genius with prodigious like skills in programming, computing, and hacking. However, she can be socially awkward as she was a former shut-in. Despite this, her determination to improve has led her to becoming a regular and sociable 2<sup>nd</sup> year high school student at Shujin Academy. She appears in LeBlanc Café as she is Sojiro's adopted daughter who helps him out with the café every now and then. She is a big fan of anime figurines and anything that is cute.</p>
	<p>Name: <b>Haru Okumura</b>  Requirements: <b>MAX Kindness &amp; MAX Intelligence</b>  Location: <b>Shujin Academy Garden (Weekdays)</b>. When unlocked, also <b>Big Bang Burger (Weekends)</b>  Availability: <b>Afternoon (Weekdays), Evening (Weekends)</b></p> <p>Haru is currently the acting CEO of the Okumura Foods Corporation, which is well known for their chain of cafes and restaurants. One such chain is the fast-food joint Big Bang Burger, which serves burgers of epic proportions deemed to be "Out of this world". Despite that, she is also a university student majoring in business administration who spends time in Shujin Academy's Gardens, working on a university project about plant growths as she takes up agriculture studies on the side. She tends to the local Big Bang Burger chain on weekends to ensure the employees' well-being as she works towards her dream of establishing her own café.</p>



	<p>Name: <b>Tae Takemi</b>  Requirements: <b>MAX Kindness + MAX Guts</b>  Location: <b>Clinic (Weekdays and Sunday)</b>  Availability: <b>Evening (Weekdays and Sunday)</b></p> <p>Takemi is the lead doctor of the clinic along the Back-Alley of Yongen-Jaya. After her success in medical research, she has formed a research team with some medical interns working in her clinic. She visits her clinic on weekday evenings to see how her research project is going and to tend to patients when necessary.</p>
	<p>Name: <b>Sadayo Kawakami</b>  Requirements: <b>MAX Intelligence &amp; MAX Guts</b>  Location: <b>LeBlanc Café (via Phone call)</b>  Availability: <b>Monday, Thursday, Friday, Sunday (Evening)</b></p> <p>Known as “Ms. Kawakami”, she was formerly Ren’s homeroom teacher during his 2<sup>nd</sup> year. She has been tasked with helping individuals with tutoring sessions to help them prepare for their college entrance exams. Because of everything Ren did for her, she volunteers to help him prepare for his college entrance exams through a private tutoring service.</p>
	<p>Name: <b>Sumire Yoshizawa</b>  Requirements: <b>MAX Kindness + MAX Intelligence + MAX Guts</b>  Location: <b>Shujin Academy Gym</b>  Availability: <b>Monday, Wednesday, Friday (Afternoon)</b></p> <p>Sumire is a 2<sup>nd</sup> year student at Shujin Academy who is enrolled under a gymnastics scholarship program. As Shujin’s pride and representative during gymnastics meets, she trains endlessly to improve her skills. She is normally seen in the gym training for an upcoming gymnastics meet, although she needs to be reminded not to overtrain and overexert herself at times. She appreciates having a training buddy due to her competitive nature, but a lot of guts are needed to attempt the moves her training buddy needs to pull off!</p>

## Appendix B. Activity Map

### LeBlanc Cafe

- \* **Study** – Adds +1 point to Knowledge. Purchasing the Music Player from the Second Hand Shoppe enables Ren to randomly earn +2 Knowledge points 75% of the time **(Activity)**
- \* **Watch a DVD** – Available when the player has purchased the DVD Player. Effect varies based on DVD selected. Each DVD can only be watched once **(Activity)**
- \* **Help Sojiro** – Available only when Sojiro is available. Spends time with Sojiro **(Confidant)**
- \* **Spend time with Futaba** – Available only when Futaba is available. Spends time with Futaba **(Confidant)**
- \* **Call Kawakami (100 Yen required to use the phone)** – Available only when Kawakami is available. Spends time with Kawakami **(Confidant)**

### Back Alley

#### \* **Second Hand Shoppe (Store)**

- DVD Player = 5,000 Yen (Sold only once). Enables Ren to watch DVDs in LeBlanc Café.
  - Music Player = 5,000 Yen (Sold only once). Enables Ren to listen to music while studying in LeBlanc
  - Desk Clock = 1,000 Yen (Sold only once). Gift Item
- \* **Convenience Store (Job)** - Gives Ren a random Yen amount between 400 – 800 Yen multiplied by (Intelligence Level + 1). **(Activity)**
  - \* **Warm Bath** - Requires 500 Yen. Gives Ren a random value between 1 to 2 points to a random stat between Kindness, Guts, and Intelligence. Available only at night. **(Activity)**

### Clinic

#### \* **Buy vitamins (Store)**

- Herbal Supplement = 2,000 Yen. Upon purchase, doubles the amount of stat points obtained for the next activity performed. Can only be purchased once per day and effect wears off upon advancing the time. Effects do not stack if purchased alongside another stat booster and overwrites the previous stat booster purchased (ex: Pork Tonkotsu Bowl). Does not affect watching DVDs.

- Green Tea Supplement = 3,000 Yen. Available ONLY when Takemi is unlocked as a Confidant. Upon purchase, doubles the amount of confidant points obtained for the next confidant spent time with. Can only be purchased once per day and effect wears off upon advancing the time

- Eucalyptus Oil Extract = 1,000 Yen. Gift Item. Available for purchase only once

\* **Participate in Takemi's Research** – Available when Takemi is available. Spends time with Takemi **(Confidant)**

## Train Station

### \* Tonkotsu King (Store)

- Pork Tonkotsu Bowl = 1,500 Yen. Upon purchase, doubles the amount of Guts obtained from the next activity performed if the next activity rewards Guts. Can only be purchased once per day and effect wears off upon advancing the time Effects do not stack if purchased alongside another stat booster and overwrites the previous stat booster purchased (ex: Herbal Supplement, Chicken Katsu Bowl). Does not affect watching DVDs.

- Chicken Katsu Bowl = 1,500 Yen. Upon purchase, doubles the amount of Intelligence obtained from the next activity performed if the next activity rewards Intelligence. Can only be purchased once per day and effect wears off upon advancing the time Effects do not stack if purchased alongside another stat booster and overwrites the previous stat booster purchased (ex: Herbal Supplement, Chicken Katsu Bowl). Does not affect watching DVDs.

\* **Hang out with Yusuke** – Available when Yusuke is available. Spends time with Yusuke. NOTE: After spending time with Yusuke, there's a 30% chance Yusuke will ask for 300 Yen so he has money to pay for his ticket ride home. Giving him 300 Yen will provide a bonus +1 point to his Confidant rating. The player then earns 300 Yen back the next time they spend time with Yusuke. This bonus is NOT affected by any multipliers that give bonus confidant points (ex: Green Tea Supplement). **(Confidant)**

## Underground Mall

### \* Gift Shop (Store)

- Perfume = 2,500 Yen. Gift Item. Available for purchase only once

- Personalized Pen = 2,000 Yen. Gift Item. Available for purchase only once

- Herbal Essence = 1,500 Yen. Upon purchase, enables kindness obtained from planting in Shujin Academy to be doubled. Does not stack with other stat boosters (e.g ex: Herbal Supplement). Only available for purchase again after Ren has performed the “Tend To Plants” Activity in Shujin Academy

\* **Flower Shop (Job)** – Gives Ren a random Yen amount between 400 – 800 multiplied by (Kindness Level + 1) **(Activity)**

\* **Spend time with Ann** – Available when Ann is available. Spends time with Ann **(Confidant)**

## Shujin Academy:

### Gym

\* **Train** = Adds +1 Point to Guts **(Activity)**

\* **Train with Ryuji** = Available when Ryuji is available. Spends time with Ryuji **(Confidant)**

\* **Train with Sumire** = Available when Sumire is available. Spends time with Sumire **(Confidant)**

### Library

\* **Study** = Adds +1 Point to Knowledge **(Activity)**

\* **Study with Makoto** = Available when Makoto is available. Spends time with Makoto **(Confidant)**

### Garden

\* **Tend to plants** = Adds + 1 Point to Kindness. If Herbal Essence was purchased in the gift shop earlier, gives +2 points instead. **(Activity)**

\* **Help Haru** = Available when Haru is available. Spends time with Haru **(Confidant)**

### Classroom

\* **Help Clean** = 25% Chance adds +2 Points to Kindness, 25% chance adds +1 to Intelligence and +1 to Kindness, 25% Chance adds +2 to Intelligence, 25% Chance adds 0 stat points. **(Activity)**



## Shibuya

### \* DVD Shop (Shop)

- \* Etiquette 101 = 1,000 Yen. Gives +2 Kindness when watched with a DVD Player in LeBlanc. Can be purchased only once.
- \* Mystery of the ancient civilization = 1,000 Yen. Gives +2 Knowledge when watched with a DVD Player in LeBlanc. Can be purchased only once.
- \* Bravery the Frightened Dog = 1,000 Yen. Gives +2 Guts when watched with a DVD Player in LeBlanc. Can be purchased only once.
- \* **Café** – 1000 Yen required. 50% Chance adds +1 Knowledge, 50% Chance adds +2 Knowledge. **(Activity)**
- \* **Fitness Gym** – 1500 Yen required. Adds +(Guts Level + 1) Points to Guts **(Activity)**
- \* **Gyudon Store (Job)** - Gives Ren a random Yen amount between 400 – 800 Yen multiplied by (Guts Level + 1). **(Activity)**

## Big Bang Burger

- \* **Big Bang Challenge** - 1,500 Yen required. Available only at night. Comes in 3 levels

Level 1: 40% Chance of clearing. Once cleared, +1 to all stat points

Level 2: Requires Level 1 challenge to be cleared. If all stats are at least Level 1, then 50% Chance of clearing. 0% Chance otherwise. Once cleared, +3 to all stat points

Level 3: Requires Level 2 challenge to be cleared. If all stats are at least Level 2, then 50% Chance of clearing. 0% Chance otherwise. Once cleared, +4 to all stat points

Once a Level is cleared, it cannot be re-attempted.

If Ren takes a stat booster (Ex: Pork Tonkotsu Bowl, Herbal Supplement) during that day, Ren will refuse to take the challenge as he “Does not feel hungry enough” **(Activity)**

### \* Big Bang Burger (Shop)

- \* Big Bang Burger Snack Combo = 1,000 Yen. Upon purchase, adds +1 stat point gained from watching a DVD within that day. Can be purchased only once per day
- \* Big Bang Burger Plush = 1,500 Yen. Gift Item. Available for purchase only once
- \* **Spend Time with Haru** – Available when Haru is here on Weekends. Spends time with Haru **(Confidant)**

## Arcade

- \* **Play rhythm game** – 100 Yen required. 70% chance increases intelligence by +1, 30% chance increases intelligence by +2 (**Activity**)
- \* **Play zombie shooter** - 100 Yen required. 70% chance increases guts by +1, 30% chance increases guts by +2 (**Activity**)
- \* **Spend time with Ryuji** – Available when Ryuji is here on Weekends. Spends time with Ryuji (**Confidant**)

## Appendix C. Event Log

(Note, these will be available in a separate text file so you may merely copy+paste the dialogues. Alternatively, you may simply include the .c file called “**events.c**” provided in the class files and call the proper functions while passing the correct parameters to trigger the respective events)

### Sojiro Sakura

#### Unlock Event:

*Sojiro: Ah! Ren! So I see you're back here and you'll be spending the next couple of months here again, like the good ol' days.*

*\*Sojiro approaches you and hands you a notebook that looks rather familiar\**

*Sojiro: Here, I kept it for you so you can use it to keep track of things before you left off. I also made sure your room is all clean and well. In fact, I have a surprise for Morgana too!*

*Morgana: Oooh! I love surprises!*

*Sojiro: Anyway, if you are able to spare some time to help out in the café in the midst of your preparation for your college entrance exams, I'd really appreciate it.*

*Morgana: Hear that, Ren? Maybe if you help Sojiro out, he'll give me more surprises!*

*Sojiro: Hahaha, well that cat never lost his meows, I suppose. Best not to get into any trouble now!*

#### MAX Event:

*Sojiro: You know, Ren. It's hard to imagine how far you've come. It seemed like only yesterday when I begrudgingly took you under my watch, and now you're on the verge of heading off to your university of choice.*

*You: [1] Does that mean I will have no more curry?*

*[2] I'll miss you...*

*Sojiro: **(Either Option)** Oh, don't be like that. It's not like you're leaving for good anyway. You'll still be able to drop by anytime you wish.*

*Sojiro: Anyway, whenever you are free and you plan to drop by, do inform me. Who knows, if business permits it, I will continue teaching you the secret to making good curry. Maybe, one day, you'll even be the one to take my place. \*chuckle\* I'm kidding of course, but no way to know what the future holds.*

## **Ryuji Sakamoto**

#### Unlock Event:

*\*As you approach the gym, you are greeted by a blonde haired individual who appears to be rushing towards you\**

*Ryuji: Hey Ren! Long time no see! I heard you were coming but I'm a little upset that we did not end up being in the same section.*

*Ryuji: Hey, how's preppin' for the college entrance exams? I heard that the exams this year are going to be even harder than any exam we've ever had. I mean...yeah, we've got some studying to do right? Hoo boy.*

*Ryuji: Anyhow, I'm back in the track team too. Hey, let's train together if you're free. Studying can get pretty boring if you overdo it to be honest with you.*

#### MAX Event:

*Ryuji: Hey Ren! Glad you're here. I heard there's this cool new Ramen place which gives us a Ramen Bowl souvenir if we are able to have 5 noodle refills. Let's go there immediately! It's my treat too!*

*\*You and Ryuji head off to Akihabara to enjoy some Ramen\**

*Ryuji: Could you imagine? Hakata Ramen all the way from Fukuoka? Brings back memories of when we had our long road trip. Hey, do you think we'll have a long road trip like that again soon? I kind of miss going around Japan with the gang.*

*You: [1] Only if you do the driving*

*[2] We could arrange it*

*Ryuji: (If [1] was selected) Well, I mean, as long as Haru isn't the one behind the wheel, I'd be game.*

*Ryuji: (If [2] was selected) For real?! That would be awesome!!*

*Ryuji: Anyhow, I really hope we continue seeing each other. You, me, and the gang. I know Haru and Makoto have already left for their university, but I'm glad I still see them around Shujin every now and then. You guys have really helped me in so many ways, more than you can imagine.*

*Morgana: You're welcome, Ryuji!*

*\*Ryuji looks at his food\**

*Ryuji: But enough being sentimental! Let's eat!*

*\*After Ren and Ryuji finish their food\**

*Ryuji: \*groan\*, I don't think I can eat anything else for the rest of my life.*

*Attendant: Congratulations! For having a total of 10 noodle refills, you get a free souvenir bowl!*

*Ryuji: The hell? I thought we get 1 for every 5 refills?*

*Morgana: Oh Ryuji, you never read do you. It says if you go over 5 refills, you get 1 free bowl. Each patron is limited to just 1 souvenir bowl*

*Ryuji: You mean I could've stopped at 5 already? Ren, you should've eaten some more too!*

*Morgana: Oh Ryuji, you've never changed. \*snicker\**

*Ryuji: What the hell does that even mean?*

*\*You spent more time with Ryuji and Morgana as they continued to argue\**

## Ann Takamaki

### Unlock Event:

*\*As you entered the underground mall, you spot a crew of photographers and what looked like to be models around the area. You suddenly hear a familiar voice calling out to you. \**

*Ann: Ren! Is that you?*

*\*You turn around and see Ann smiling and walking towards you\**

*Ann: Ren! It's sooo good to see you again! It's been a long time!*

*Morgana: Lady Ann! I've missed you! You're looking as good as ever!*

*Ann: Awwww, thanks Morgana! I missed you too!*

*Morgana: Mreeooooooooowr!*

*Ann: Hey, I currently have a bunch of photoshoots lined up. It can get pretty exhausting though. Hey, when you're not too busy, could you come drop by? We could hang out or something.*

*Photographer: Takamaki-san! You're up!*

*Ann: Oh, sorry. That's my call. I'll see you around, Ren! You too, Morgana!*

*Morgana: Ahhh, Lady Ann. Nice to see her again.*

### MAX Event:

*Ann: Ren! I have some free time today. Would it be alright to go to Inokashira Park? Remember how we went there in the past to enjoy the atmosphere?*

*Morgana: A lovely date in the park with Lady Ann. I'm on cloud nine right now!*

*\*You and Ann take a train to Inokashira Park\**

*Ann: You know, I've been thinking so hard about how college is just around the corner. At the same time, I'm starting to make a name for myself in the modelling world. Sometimes, I wonder, what is the future going to be like? Will I have to study abroad for my modelling career? Sounds exciting, right?*

*Ann: But then again, I guess that means, we'll all have to go our separate ways. You, me, the gang...*

*You: [1] We will find a way to see each other again*

*[2] Will you bring us souvenirs?*

*Ann: (If [1] was selected) Well true. I mean, Makoto and Haru are already university students but they are still able to drop by and see us every now and then...though I might have a harder time, seeing as I will be in another country...*

*Ann: (If [2] was selected) Really? Is that all I am to you? A souvenir shop? Come on!*

*Ann: But anyway, you're right. It's not the first time I was away from you guys anyway. We were still able to keep in contact nonetheless. I'm sure there will be a lot of opportunities for me to travel back here and see you guys anyway.*

*Morgana: That is true, Lady Ann! No matter where you are, we will always be with you in spirit!*

*Ann: That's so true, Morgana. Thank you!*

*Morgana: You're so sweet, Lady Ann!*

*\*Ann Ponders for a moment\**

*Ann: Hey, what am I saying? I don't even feel ready for the upcoming college entrance exams! I have to remember to study as well! Being a model doesn't give me an excuse to neglect my studies anyway. After all, being a successful model entails being successful in my studies too.*

*Ann: You'll help me with my studies, right Ren? If I get good grades and get into a good university, it will open more opportunities for me to travel and meet you guys!*

*\*Ann looks at you again with glee\**

*Ann: By the way, I'm starving. Want to get some snacks? I'm in the mood for some cake and desserts!*

*\*You spent a while chatting with Ann and feeling her resolve to become successful while having cakes\**

## **Yusuke Kitagawa**

### Unlock Event:

*\*As you enter the train station, you spot a tall and slender familiar looking young man close to your age standing by the corner. He seems deep in thought as he examines individuals crossing in and out of the platforms.*

*He then notices you looking at him and smiles.\**

*Yusuke: Ren! It has been quite some time since we've seen each other. I've heard news that you were in Tokyo again but fates haven't been kind enough to let our paths cross...that is until now.*

*\*He gazes back at the crowd\**

Yusuke: You see, I am in dire need of inspiration for my next art piece. Perhaps seeing the crowd and their mixture of emotions will help me come up with the inner thoughts that I will need for my work. Do you suppose you could help me out when you are able to?

*\*He then pauses and puts a hand in his pocket\**

Yusuke: Also, I am sometimes a bit short on cash. Do you think you could also help me get some cash for my train rides home? I tend to have a need for some art materials that require my monetary resources every now and then.

#### MAX Event:

Yusuke: Ren! I'm so glad you're here. May I ask if you would come with me to the Ueno Art Museum? Don't worry. Sensei gave me money for transportation, enough for me to bring a friend along.

*\*You and Yusuke travel to the Ueno Art Museum\**

Yusuke: You know, it finally dawned on me that what I was lacking was not merely inspiration. As I look at the crowds in the train station and the crowd staring at the paintings, it dawned on me that merely observing other individuals is not enough.

You: [1] – Having enough money is important too?

[2] – What was it that you were missing?

Yusuke: **(If [1] was selected)** Well yes, indeed. But that is to pay for my food and transportation, and not to help me with my painting.

Yusuke: **(If [2] was selected)** It dawned on me after spending a lot of time with you.

Yusuke: You made me realize that you would spend time with me because you wanted to. So I remembered that I should paint because I want to. I love to. Just observe all these individuals appreciating that painting. It doesn't look like they are being forced to admire such art piece...they are admiring it from the bottom of their hearts because they chose to.

Morgana: That's Yusuke alright. He thinks like he's from a different world.

Yusuke: Sort of like when we were together as phantom thieves. Many times we had the opportunity to quit and give up, but we all decided to stick together because we chose that path. So I should do the same! Why did I love Art in the first place? Why did I love painting? I have to express that and show the world through my next art piece!

Yusuke: I am an artist, and thank you for reminding me, Ren. I will show you that my next art piece will be my proclamation of my undying love towards painting. That will be my next masterpiece! And I have you to thank, Ren. Thank you, for reminding me.

*Morgana: Uhhh...sure. I'm certain Ren never really did anything but lend you transportation money every now and then, but you do you, Yusuke!*

*\*You spent more time appreciating various Art works with Yusuke in the museum and listening to him gush about his next masterpiece before returning home\**

## **Makoto Nijima**

### Unlock Event:

*A slender young woman with short bob cut hair spots you and waves. She looks familiar.*

*Makoto: Ren! I heard that you were back here in Shujin Academy. Fancy seeing you here again, in the library of all places!*

*\*She motions you to sit down on the chair beside her.\**

*Makoto: I know you're surprised to see me as well. I'm here in Shujin because I'm conducting a research project for one of my university subjects regarding how students balance their extra-curricular activities and their academic work. I've actually asked Ann and Ryuji's help for my study, considering Ann is able to be a part-time model while Ryuji is part of the track team.*

*Makoto: Of course, I'm not sure if the both of them are the perfect examples of balance, because academically wise...well...they always needed some guidance in that department.*

*\*She looks at the books nearby and motions you towards the books about reviews books for college entrance exams\**

*Makoto: Speaking of guidance, if you are in need of any help studying for your entrance exams, I'd be glad to provide you with some. If you happen to be in the library while I'm here, I'd be more than happy to help you understand some concepts that you might need help with.*

### MAX Event:

*Makoto: Hey Ren! There's something I'd like to talk to you about. Let's move to a place where there is less people.*

*\*You and Makoto move to the currently empty student council room\**

*Makoto: This place...it brings back memories. I remember, this was the very room where I interrogated you about being a phantom thief. Little did I know, I'd become one and it would be the moment where it would forever change what I'd become.*

*You: [1] You were so scary that time.*

*[2] You don't seem any different.*



*Makoto: (If [1] was selected) \*chuckle\* Well, it was a serious issue that time, and I needed answers. I guess I got that imposing attitude from my sister. My bad.*

*Makoto: (If [2] was selected) I don't know what you mean by that, but I'll take that as a compliment, thank you.*

*Makoto: You know, up until that point in time, I was more focused on getting good grades, studying, and pleasing the teachers. However, I was never really focused on what I wanted to do after it. Being with you guys made me realize that there was more to life than just studying and making my sister and teachers proud of me.*

*Makoto: I wanted to become proud of myself too. That's one thing that I learned and the reason why I decided to work on this project. I wanted to remind other students not to get lost in the midst of all the studying, but to find ways on how to work on their passion as well by participating in extracurricular activities.*

*\*Makoto looks at the friendship bracelet Ann gave everyone during their vacation trip\**

*Makoto: Of course, I probably would not have realized this if it weren't for you and the phantom thieves. Maybe, things would be different. I'd probably still be too busy prioritizing getting good grades and being an honor student had we not met each other. Instead, I also make sure to remember what my passion is, and that is to work in the police force...to follow the footsteps of my father.*

*\*She then looks at you and smiles\**

*Makoto: I hope you don't forget your dreams, Ren. Of course, it's easier for me to say this to you, considering you're doing quite well with your studies. Same can't be said about Ryuji though...but don't tell him I told you this. \*chuckle\**

*\*She then heads over to you and hands you a small keychain\**

*Makoto: They gave this out in our university fair the other day. I want you to have it. I also gave it to the others, but I hope that serves as a reminder that we'll always be together as a group, and we'll always work on our hopes and dreams together...even if it means helping each other out to accomplish them.*

*\*You and Makoto continued chatting before heading home\**

## **Futaba Sakura**

### Unlock Event:

*\*As you settled into LeBlanc, a familiar voice follows the ringing of the door's entrance bells\**

*Futaba: Hey Sojiro! I hunger. I want some curry if...*

*\*The small built orange haired girl with glasses rushes over to you and gives you a squeeze\**

*Futaba: REN! IT'S BEEN LIKE...FOREVER! Hey, I've heard from Sojiro that you're always here but I never see you whenever I'm here. I don't see you in school either! Have you been avoiding me because you owe me a year's supply of instant noodles?*

*Sojiro: Now, now. Don't scare him, Futaba. He's got a lot on his plate preparing for his college entrance exams.*

*Futaba: Oh right! You're going to college soon. Welp, I guess that means you'll have to do a lot of studying. But hey, if you're not too busy, maybe you could watch some anime with me! I have a nice collection of them, and I've gotten more since we've last met.*

*\*Futaba smiles but then turns to Sojiro, giving him a serious look\**

*Futaba: Now for the task at hand. Sojiro...curry...famished...please...thank you!*

#### MAX Event:

*Futaba: Ren! I'm sooo glad you're here. I've been getting really good grades, so Sojiro gave me some money so I could enjoy and buy some things as a reward. Could you come with me? I want to go to Akihabara.*

*\*Futaba turns to Sojiro\**

*Futaba: Hey Sojirooooo! Ren and I are headed to Akihabara.*

*Sojiro: Okay you two. Just be careful and don't stay out too late.*

*Futaba: WOHOOO! Akihabara shopping, here I come!*

*\*You and Futaba head over to Akihabara and spend quite some time shopping for anime merchandise\**

*Futaba: You know, I remember the first time I tried to go alone here, I panicked and froze. It seems like it happened a long time ago, but that is still fresh in my memory. The feeling of being unable to breathe, feeling like my world is collapsing, almost passing out, I don't know what would've happened if you and Ryuji never showed up to help me.*

*You: [1] You've changed for the better.*

*[2] I'm glad you're alright now.*

*Futaba: **(Either option)** I have you guys to thank. Now, I'm able to go to places with large crowds on my own, attend school regularly, and I feel like a normal functioning protagonist able to interact with NPCs on a regular basis now!*

*\*Futaba's gaze moves downwards\**

*Futaba: Still, is it really true that you, Ann, and Ryuji will be leaving for college soon? I understand that Inari is also going to be leaving soon. Makoto and Haru are in college but they still find time to visit sometimes.*

*Futaba: I know we have to keep moving forward, but would it be possible that we'll find a way to... still remain together as a group? Our phantom thieving maybe a thing of the past, but we still have a lot of miscellaneous side quests and post-game content to accomplish, right?*

*You: [1] We'll always keep in touch.*

*[2] What are the post-game rewards?*

*Futaba: (If [1] was selected) Exactly. In fact, I can make an app that will be exclusive to us ex-phantom thieves to help us keep in touch. I just hope Haru learns how to use it properly. She does have a difficult time getting accustomed to anything tech-related.*

*Futaba: (If [2] was selected) It depends. I'll leave that up to you to decide. Just make sure that it includes my 1 year's supply of instant noodles that you promised!*

*Futaba: Either way, what I'm saying is...I want you guys to be permanent party members in my journey. I couldn't imagine how I would be right now if it weren't for you guys. So please promise me, you guys will always be a part of my party!*

*Futaba: It's a deal, right?*

*\*You feel Futaba's resolve\**

*Futaba: Now that it's settled, let's proceed to our next quest! Operation: Obtain-Roast-Chicken-For-Dinner!*

*\*You and Futaba head off and buy Roast Chicken to take home for dinner which you shared with Sojiro\**

## **Haru Okumura**

### Unlock Event:

*\*As you enter the gardens, you spot what looks like a student who appears to be an alumni conversing with a teacher. Upon the end of their conversation, you finally make out the figure of the alumni who appears to be someone familiar\**

*Haru: Ren-kun! It's a charm to see you here again! Just earlier, I caught up with Mako-chan just a while earlier, and I was surprised to see her conducting her research project here too!*

*Morgana: Haru! It's been a while since I've seen you!*

*Haru: Thanks, Mona-chan! So glad to see you and Ren-kun are doing all right! By the way, I was just talking to Mr. Hiruta earlier. He said that he'd allow me to conduct experiments to help me find a way to aid plants in producing more fruits or vegetables!*

*Morgana: Still into plants, I see...*

*Haru: I'd like to perform these experiments as they will help in both my studies and in producing ingredients for Okumura Foods. Do you think you could help me when you're free? I'd really appreciate it.*

*\*Haru then turns to the plants\**

*Haru: Well, I'll work on these plants now. Let's have a chat when you're not too busy, Ren-kun! You too, Mona-chan. \*giggle\**

#### MAX Event:

*Haru: Oh Ren-Kun! I'm glad you're here. Do you think it would be alright if you and I catch a movie? There's this movie I'm interested in watching right now. It's called "Jigsaw X".*

*Morgana: Uhhh...that movie sounds terrifying.*

*Haru: Since Halloween is coming, there are a lot of horror movies showing in the cinemas right now. It's my treat, Ren-kun. I'll also be taking care of dinner too so don't worry about spending anything.*

*\*You and Haru head on over to the Shibuya cinemas and watch the movie. During the entire duration of the movie, Morgana hid in Ren's bag\**

*Haru: That was such a fun movie! I'm so glad you accompanied me. Others find the movie too terrifying to watch and I didn't want to go alone.*

*Morgana: \*gulp\* Th-that...was...h-horrifying*

*You: [1] That was terrifying, Haru...*

*[2] Thanks for inviting me.*

*Haru: (If [1] was selected) \*giggle\* That's what horror movies are supposed to do, right? If it wasn't terrifying, it wouldn't be called a horror movie.*

*Haru: (If [2] was selected) I honestly tried inviting Ann-chan and Mako-chan earlier, but they both turned me down. They said they didn't like horror movies so I'm glad you came along.*

*Haru: Come on! Let's have some sushi for dinner. Horror movies can make you work up an appetite. I hope you're hungry!*

*Morgana: HOORAY! FATTY TUNA, COME TO ME!*

*\*You and Haru head off to Ginza for some good sushi\**

*Morgana: Finally, after all these years, I'm able to experience delectable Fatty Tuna coming into contact with my taste buds! Mreeeeeeowr!*

*Haru: \*giggle\* I'm glad you're enjoying it, Mona-Chan.*

*\*Haru turns to you\**

*Haru: You know Ren-kun, you're going off to college soon, and so will Ryuji-kun and Ann-chan. I'm so happy to see that Mako-chan is able to keep in touch and we have a chance to see each other thanks to our university work but...is it really sustainable?*

*Haru: Then there's also me taking over our businesses. It means that immediately after I'm through with university work, I'll be extremely busy. Maybe I won't have time to meet you guys again. Ann-chan told me the possibility of her studying abroad is very real, and you are just back here in Tokyo because of remedial classes, but after that, who knows where you'll be going off to?*

*You: [1] – If you promise to keep treating me with sushi, I'll keep coming back*

*[2] – The phantom thieves will always be together, no matter what*

*Haru: (If [1] was selected) I'm sure someday, you'll have enough money to be the one treating me instead, Ren-kun. \*giggle\**

*Haru: (If [2] was selected) Yeah, you're right! We've faced worse challenges together and in the end, we've always ended up overcoming them. This will just be another challenge that we'll face together as a group!*

*Haru: Either way, I'll work hard to make sure that we will have all the opportunities to find a way to be together as a group. My line of work might require me to travel a lot, so I guess that gives me an excuse to catch up with you guys when I can, right?*

*\*Haru looks at the uneaten sushi in front of her\**

*Haru: For now, let's enjoy this moment. This is the restaurant's special sushi. You might be interested in giving this a try, Mona-chan!*

*Morgana: Oh, yes please! Give me more of that lovely sushi!*

*\*You and Haru spent time enjoying sushi together before heading back home\**

## Tae Takemi

### Unlock Event:

*\*As you enter the clinic, you spot the group of interns huddled together as what appears to be the lead doctor can be seen blurting out instructions to the group.\**

*Takemi: Prescribe some amoxicillin immediately, 1000 milligrams and 30 milligrams of lansoprazole every 8 hours for the next two weeks. Make sure that the patient does not miss a dosage.*

*\*Takemi spots you and smiles as her interns scramble to move towards a patient. She motions you to come forward\**

*Takemi: My, my. My little guinea pig is here again. It's been a while since I've seen you.*

*\*She glances at the interns and the patient nearby\**

*Takemi: Oh, don't mind them. Just a stomach infection caused by Helicobacter Pylori. They should be back on their feet in no time, provided they don't misuse the antibiotics I instructed them to prescribe.*

*Takemi: Hey, as long as you're here, and seeing as you've helped me in the past, do you think you could help me out again? I'm working on a new medicine that will supposedly help out in curbing the recent surge in superbug infections. Seems more than a couple of folks have been taking antibiotics for even the seasonal cold.*

*\*You feel a slight sense of dread cross you as she picks up a syringe lying nearby\**

*Takemi: Don't worry though. I promise, I won't take as much blood samples as I did in the past...I just need your help for some manpower. No pressure though. Only if you have time, although I'd gladly appreciate it.*

*\*Takemi then walks off and puts some medicine into the syringe before injecting it to another patient. You are relieved that the syringe was not meant for you.\**

### MAX Event:

*Takemi: Hi! Would you have some time to spare today? My co-doctor from the university hospital I'm cooperating with wants to see me personally. They sounded excited. I'd appreciate it if you could come along with me so I could introduce you to them as well.*

*\*You and Takemi travel to Tokyo Medical University.\**

*Doctor: Dr. Takemi! It is great to see you!*

*Takemi: Cut to the chase, Dr. Schweizer. You sounded like you had good news to bring to me.*

*Doctor: Yes. I am happy to say that our experimental drug has received clearance after clinical trials. The patients that have been infected with drug resistant tuberculosis have exhibited marvellous improvements and their infection levels and white blood cell count have all gone down.*

*Takemi: \*gasp\*...What?*

*Doctor: It seems that the new antibiotic treatment that we have developed is effective against these drug resistant bacterial strains. You have to come and see the patients. They are all conscious and responsive!*

*Takemi: I...please. I want to see them immediately.*

*\*Takemi turns to you\**

*Takemi: If you don't feel up to it, you may just wait here.*

*\*After a while, Takemi returned and she looked very happy\**

*Takemi: It is true indeed. Our experimental drugs are indeed effective against the antibiotic resistant strains, and they are also fine for individuals who are immune-compromised.*

*Takemi: The thought of being able to help so many lives...it's just amazing to see how far I've come.*

*\*Takemi then looks at you warmly\**

*Takemi: You know, it's all thanks to my guinea pig. If it weren't for you and your help before with Oyamada and Miwa, who knows if I'll still be a doctor right now.*

*You: [1] – I wouldn't have had to endure all those needles*

*[2] – I wouldn't have medicines for my exams*

*Takemi: (If [1] was selected) Hey, you have to admit...it was all worth it. Think of all the lives you helped me save by having to endure all my clinical trials*

*Takemi: (If [2] was selected) Not this again? Didn't you give me that excuse before? Think of something new...*

*Takemi: But either way, I can't believe you have so much faith in me, the way you'd take some time to help me out with my clinical trials. I reckon this is a side effect of your time being a phantom thief, hmm? Always helping others and wanting to put others before yourself.*

*\*Takemi motions you to take a walk with her\**

*Takemi: Either way, you're going to college soon, right? Do you have any plans of becoming a doctor?*

*You: [1] – The thought hasn't crossed my mind yet..*

[2] – Ummm...

*Takemi: **(Either option)** Either way, I'm sure you'll do well with whatever field you decide. Just be you. If you need a recommendation letter though, I'd be more than willing to provide you with one to help with your application, hmmm?*

*\*Takemi then looks at her watch\**

*Takemi: By the way, it's still quite early. Want to get some dinner? My treat. Think of this as a thank you for all the voluntary help you've given me during my clinical trials. Allow me to just call my interns so they can come along too. You don't mind, do you?*

*\*You and Takemi enjoy a sumptuous dinner with all her interns before returning home\**

## **Sadayo Kawakami**

### Unlock Event:

*\*As you enter LeBlanc Café, you spot a woman who looks slightly older than you speaking to Sojiro. They both look at you as you enter the café and realize that the woman was your previous teacher.\**

*Sojiro: Ah, Ren! Welcome back. Looks like you have a visitor. Ms. Kawakami is here today.*

*\*Kawakami approaches you\**

*Kawakami: Amamiya-kun! It is nice to see that you are doing well. I've received word from the faculty department that you have been putting in a lot of effort in your studies lately.*

*Sojiro: Oh, you're not Ren's teacher this time around?*

*Kawakami: No. I'm not assigned to handle the third years who are taking remedial courses to prepare for their college entrance exams. However, I've come to give Amamiya-kun this.*

*\*Kawakami turns to you and hands what looks like a business card\**

*Kawakami: I understand that you are very intelligent and knowledgeable, but you might need reinforcement lessons for the entrance exams. It's a tutorial service for students who are in need of extra sessions to ensure they are well prepared.*

*\*Kawakami bows and motions towards the payphone\**

*Kawakami: Do give me a call so I can help you out, even when it's past school hours. I believe you'll benefit from these extra lessons. Be good and all the best with your studies, Amamiya-kun!*

*\*Sojiro turns to you as Kawakami leaves\**



*Sojiro: These tutorial sessions look like they will be helpful indeed, but judging by the number, it looks like it's only accessible through a landline.*

*\*Sojiro then looks at the payphone\**

*Sojiro: You could use the payphone to call her up and request her to tutor you...it will just cost you 100 yen whenever you do, though. Consider that as helping out the business to whenever you do.*

#### MAX Event:

*Kawakami: You know something, Amamiya-kun! I think you are more than ready enough for the college entrance exams! It's almost as if there is nothing left that I can teach you.*

*Kawakami: I guess all that's left now is to write you a recommendation letter for your application form. I'm sure you'll be accepted into your first choice, given all your hard work.*

*\*Kawakami pauses a little bit and ponders in thought\**

*Kawakami: \*sigh\* I can't believe you're going to college soon.*

*Kawakami: It seemed like only yesterday when I saw you as a delinquent and questioning why you were assigned in my class. Little did I know that I'd witness that same delinquent becoming a crusader for justice and a fine young man right before my very eyes.*

*You: [1] – It's all thanks to you.*

*[2] – Is that the right way to call me "Master"?*

*Kawakami: (If [1] was selected) I'm sure that I can't take all the credit. You deserve the credit more than I ever will.*

*Kawakami: (If [2] was selected) Still not over that phase? I think it's about time we sort of...move on from that.*

*Kawakami: But as I was saying...I guess I shouldn't judge a book by its cover. As a matter of fact, if it weren't for you, I wouldn't be the teacher that I am right now. It's highly likely I would've quit teaching too if it weren't for you and your help.*

*\*Kawakami then smiles warmly\**

*Kawakami: I guess that means you're leaving this place when you go to college right? That means you'll probably have an easier time availing of the special services I promised you before.*

*\*Kawakami stands up and looks at your surroundings\**

*Kawakami: Then again, I guess you have to start practicing now. I won't be around to help you clean your room after all should you decide to do so. Hey, you'll have to learn how to clean your own room and cook your own healthy meals, you know. Don't rely too much on those instant meals...they're bad for your health.*

*Kawakami: Either way, I'm sure you'll figure that out. After all, you've done way more things than I could ever imagine myself doing.*

*\*Kawakami prepares to leave and looks at you one last time\**

*Kawakami: Please remember to drop by the faculty office so I can give you your recommendation letter...Master. Nyan nyan...\*giggle\**

## **Sumire Yoshizawa**

### Unlock Event:

*The gym seems more crowded than usual. You can hear whistles being blown and what appears to be a group of gymnasts training hard. In the midst of the crowd, you spot a red haired girl who appears to be one year lower than you excitedly approaching you.*

*Sumire: Senpai! You're here! I'm so glad...oh...*

*\*Sumire pauses and looks embarrassed as she wipes her forehead\**

*Sumire: Forgive me for looking very sweaty. There's this meet coming up and I'll be one of the representatives of Shujin High. I promised Coach Hiraguchi that I would win the meet for the school and she has utmost faith in me that I could deliver...although that means a lot of heavy training sessions.*

*\*Sumire's eyes beam up as if she came up with an idea\**

*Sumire: Maybe I'll have an easier time if you train alongside me. It will make me feel less pressure for the upcoming meet if you're here. Will you please train alongside with me?*

*\*Sumire's eyes slightly sink as if she remembers something\**

*Sumire: Oh, right...you're preparing for your college entrance exams, so I've heard. I guess that means you'll be very busy.*

*Coach Hiraguchi: Sumire! It's time to re-do your routine. There are somethings that could use some improvement.*

*\*Coach Hiraguchi sees you and smiles\**

*Coach Hiraguchi: Oh! Nice to see you again! Are you here to cheer Sumire on?*

*Sumire: Coach! No, I...he's...*

*\*Sumire looks flustered\**

*Coach Hiraguchi: Anyway, will you excuse Sumire for a while? She has a meet coming soon and we need as much training as we can.*

*Sumire: Yes, ma'am. Immediately!*

*\*Sumire then turns to look at you again\**

*Sumire: If you're not too busy senpai, drop by and train alongside with me. I'd really appreciate it! Well, I must return to training again. See you around, senpai!*

#### MAX Event:

*Sumire: Senpai! I'm so glad you came today. The meet is going to be starting in a while. Would you kindly accompany me? I'd really appreciate it and I feel you'll bring me good luck. Please?*

*\*You accompanied Sumire along with the other representatives to the event\**

*Sumire: Oh my, all competitors who have performed so far have been so amazing! I know I can do better than them, but I'm so nervous right now, senpai!*

*Announcer: And up next, we have Sumire Yoshizawa from Shujin Academy!*

*Sumire: I'm up next, senpai! Wish me luck!*

*\*Sumire performed what appeared to be her best performance ever and you could hear amazed reactions from the crowd. Coach Hiraguchi can be seen smiling during Sumire's performance\**

*Audience member: What an amazing performance!*

*Audience member: She's a cinch to win this event!*

*\*After her performance, Sumire rushes over to you\**

*Sumire: I tried my best. I hope it was good enough, but I think I did a pretty good job.*

*You: [1] You were amazing!*

*[2] I was too busy starting at you to notice your performance.*

*Sumire: (If [1] was selected) Thank you, senpai! I worked very hard day in and day out for that kind of performance!*

*Sumire: (If [2] was selected) I...I don't know how to respond to that, but I think that means you thought my performance looked great. I worked very hard day in and day out for that performance!*

*Coach Hiraguchi: Sumire, that was an amazing performance! That's even better than the way you performed during our training sessions!*

*Sumire: Ma'am I...Thank you, I don't know what to say!*

*Sumire: Deep down inside, I knew I wasn't just performing for myself. I wanted to perform to make you proud, to make my sister proud, and to make my senpai over here proud of accompanying me despite his busy schedule.*

*\*Coach Hiraguchi then turns to you\**

*Coach Hiraguchi: I guess I owe you for Sumire's wonderful performance too, don't I? \*chuckle\**

*Sumire: M-ma'am? I...I didn't mean it that way...*

*Announcer: And now, the judges have finished deliberating the results of this year's gymnastics meet. We will be announcing the winner of the event shortly.*

*Sumire: Oh my, here it is! I hope I did well enough to make it!*

*Audience member: I bet that girl with red hair is the winner!*

*Announcer: And the winner of this year's meet is...Sumire Yoshizawa from Shujin High!*

*Sumire: Oh my gosh. Senpai! Coach! I won! I won!*

*Announcer: May we ask Ms. Yoshizawa to please come in front to receive her award?*

*\*Sumire appears in front and receives her award, much to the delight of Coach Hiraguchi and the audience members. After the awarding ceremony, Sumire approaches you\**

*Sumire: Senpai, I can't believe I won! This is like a dream come true for me, to win with you watching me and to make Coach Hiraguchi proud of me! I just...wish my sister was here with me today.*

*You: [1] You worked hard for this, Sumire*

*[2] Your sister would've beaten you.*

*Sumire: (If [1] was selected) Thank you so much, Senpai. That means a lot to me!*

*Sumire: (If [2] was selected) You think so? I think you're just saying that so I will continue working hard for my next meet.*

*Sumire: Either way, thank you so much. You've done so much for me, ever since the events last year.*

*\*Sumire suddenly looks downtrodden\**

*Sumire: You're going off to college, right? I guess that means I'll probably see you less often, if I will even get to see you. I guess it will be selfish of me to ask you to visit Shujin whenever you're free but...would you promise me that you'll stay in touch with me?*

*You: [1] – I promise*

*[2] – We'll always be in touch*

*Sumire: I'm so glad to hear that, senpai!*

*\*Coach Hiraguchi approaches\**

*Coach Hiraguchi: Sumire, that was amazing! I'm sure your sister would be so proud of you.*

*Sumire: Thank you ma'am! I...I do wish she was watching, wherever she is, I dedicate this to her.*

*Coach Hiraguchi: I'm sure she was watching you and that she's proud of what you have become. You have a bright future ahead of you, Sumire. I hope you continue doing what you're doing...your potential towards international glory is all but given seeing what you've become so far.*

*Sumire: Ma'am, you have no idea how much those words mean so much to me. I promise, I'll continue working hard so that you'll be proud and for my sister's honor.*

*Coach Hiraguchi: That is amazing to hear, Sumire. I look forward to that.*

*\*Coach Hiraguchi turns to you\**

*Coach Hiraguchi: I see that Sumire owes you a lot too. I hope you can stick around so that you can also witness the bright future she has ahead of her.*

*Sumire: C-coach! I...ummm...uh...*

*Coach Hiraguchi: Hahahaha! Come now. I was just getting lost in the mood. Hey, why don't we have a celebratory dinner with everyone in recognition of your accomplishment, Sumire? And if your boyfriend is not too busy, he could come along too.*

*Sumire: H-he is not my b-boyfriend! He's j-just my senpai, ma'am!*

*Coach Hiraguchi: Here, come along too! I'm sure you're starving anyway.*

*\*You join Shujin High's gymnastics team for a celebratory dinner. However, it turned out to be a very awkward one, with Sumire acting flustered all night and you not being too familiar with all the other members\**

## **Appendix D. CCPROG1 MP Procedure**

### **How to Approach the Machine Project**

#### **Step 1: Problem analysis and algorithm formulation**

Read the MP Specifications again! Identify clearly what are the required information from the user, what kind of processes are needed, and what will be the output (s) of your program. Clarify with your professor any issues that you might have regarding the machine project.

When you have all the necessary information, identify the necessary functions that you will need to modularize the project. Identify the required data of these functions and what kind of data they will return to the caller. Write your algorithm for each of these modules/functions as well as the algorithm for your main program.

#### **Step 2: Implementation**

In this step, you are to translate your algorithm into proper C statements. While implementing, you are to perform the other phases of program planning and design (discussed in the other steps below) together with this step.

Follow the coding standard indicated in the course notes (Modules section in AnimoSpace).

You may choose to type your program in a text editor or an IDE (i.e. Dev-C IDE) at this point. Note that you are expected to use statements taught in class. You can explore other libraries and functions in C as long as you can clearly explain how these work. You may also use arrays, should these be applicable and you are able to properly justify and explain your implementation using these. For topics not covered, it is left to the student to read ahead, research, and explore by himself.

#### **Note though that you are NOT ALLOWED to do the following:**

- to declare and use global variables (i.e., variables declared outside any function),
- to use goto statements (i.e., to jump from code segments to code segments),
- to use the break or continue statement to exit a block. Break statement can only be used to break away from the switch block,
- to use the return statement or exit statement to prematurely terminate a loop or function or program, • to use the exit statement to prematurely terminate a loop or to terminate the function or program, and • to call the main() function to repeat the process instead of using loops.

It is best that you perform your coding “incrementally.” This means:

- Dividing the program specification into subproblems, and solving each problem separately according to your algorithm;
- Code the solutions to the subproblems one at a time. Once you’re done coding the solution for one subproblem, apply testing and debugging.

## Documentation

**While coding**, you have to include internal documentation in your programs. You are expected to have the following:

- File comments or Introductory comments
- Function comments
- In-line comments

Introductory comments are found at the very beginning of your program before the preprocessor directives. Follow the format shown below. Note that items in between < > should be replaced with the proper information.

```
/*
    Description: <Describe what this program does briefly>
    Programmed by: <your name here> <section>
    Last modified: <date when last revision was made>
    Version: <version number>
    [Acknowledgements: <list of sites or borrowed libraries
and sources>]
*/

<Preprocessor directives>

<function implementation>

int main()
{
    return 0;
}
```

**Function comments precede the function header.** These are used to describe what the function does and the intentions of each parameter and what is being returned, if any. If applicable, include pre-conditions as well. Pre conditions refer to the assumed state of the parameters. Follow the format below when writing function comments:

```
/* <Description of function>
    Precondition: <precondition / assumption> @param <name>
    <purpose>
    @return <description of returned result> */
<return type>
<function name> (<parameter list>)
:
```

Example:

```
* This function computes for the area of a triangle Precondition: base and
height are non-negative values @param base is the base measurement of the
triangle in cm @param height is the height measurement of the triangle in
cm @return the resulting area of the triangle
*/
float
getAreaTri (float base,
            float height)
{
    ...
}
```

In-Line Comments are **other comments in major parts of the code. These are expected to explain the purpose or algorithm of groups of related code, esp. for long functions.**

### STEP 3: TESTING AND DEBUGGING

**SUBMIT THE LIST OF TEST CASES YOU HAVE USED.** For each feature of your program, you have to fully test it before moving to the next feature. Sample questions that you should ask yourself are:

1. What should be displayed on the screen if the user inputs an order?
2. What would happen if I input incorrect inputs? (e.g., values not within the range)
3. Is my program displaying the correct output?
4. Is my program following the correct sequence of events (correct program flow)?
5. Is my program terminating (ending/exiting) correctly? Does it exit when I press the command to quit? Does it exit when the program's goal has been met? Is there an infinite loop?
7. and others...

### IMPORTANT POINTS TO REMEMBER:

1. You are required to implement the project using the C language (C99 and NOT C++). Make sure you know how to compile and run in both the IDE (DEV-C++) and the command prompt (via

```
gcc -Wall -std=c99 <yourMP.c> -o <yourExe.exe>
```

2. The implementation will require you to:

- Create and Use Functions

**Note:** Non-use of self-defined functions will merit a grade of **0** for the **machine project**. Too few self-defined functions may merit deductions. A general rule is to create a separate function for each option described above, unless some features are too similar that one function can serve the purpose for two [or more] of the options. Note that functions whose



tasks are only to display are not included in the count for creating user-defined functions.

- Appropriately use conditional statements, loops and other constructs discussed in class (Do not use brute force solution. **You are not allowed to use goto label statements, exit statements. You are required to pass parameters to functions and not allowed to declare global or static variables.**) Refer to Step 2 on Implementation for other details and restrictions.
- Consistently employ coding conventions
- Include internal documentation (i.e., comments)

3. Deadline for the project is the **7:59AM of November 28, 2023 (Tuesday)** via submission through **AnimoSpace**. After this time, submission facility is locked and thus no MP will be accepted anymore and this will result to a **0.0** for your machine project.
4. The following are the deliverables:

Checklist:

- Upload in AnimoSpace by clicking **Submit Assignment** on Machine Project and adding the following files:
  - source code\*
  - test script\*\*
- email the softcopies of everything as attachments to **YOUR own email address** on or before the deadline

5. **MP Demo:** You will demonstrate your project on a specified schedule during the last weeks of classes. Being unable to show up on time during the demo or being unable to answer convincingly the questions during the demo will merit a grade of **0.0** for the **MP**. The project is initially evaluated via black box testing (i.e., based on output of running program). Thus, if the program does not compile successfully using gcc -Wall -std=c99 and execute in the command prompt, a grade of 0 for the project will be incurred. However, a fully working project does not ensure a perfect grade, as the implementation (i.e., correctness and compliance in code) is still checked.

6. Any requirement not fully implemented and instruction not followed will merit deductions.

7. This is an **individual project**. Working in collaboration, asking other people's help, and/or copying other people's work are considered as cheating. Cheating is punishable by a grade of **0.0** for CCPROG1 course, aside from which, a cheating case may be filed with the Discipline Office.

8. The above description of the program is the basic requirement. A maximum of 10 points will be given as bonus. Use of colors may not necessarily incur bonus points. Sample additional features could be:

- (a) properly and substantially using arrays in the implementation of the project,
- (b) program having save and load of order information to files,

(c) tracking each order information and presenting the set of orders that are ready for pick-up at the start of a new day. Some of the indicated additional features may require self-study.

Note that any additional feature not stated here may be added but **should not conflict with whatever instruction was given in the project specifications**. Bonus points are given upon the discretion of the teacher, based on the difficulty and applicability of the feature to the program. Note that **bonus points can only be credited if all the basic requirements are fully met** (i.e., complete and no bugs).

### **HONESTY POLICY AND INTELLECTUAL PROPERTY RIGHTS**

**Honesty policy applies.** Please take note that you are NOT allowed to borrow and/or copy-and-paste – in full or in part any existing related program code from the internet or other sources (such as printed materials like books, or source codes by other people that are not online). **You should develop your own codes from scratch by yourself.**