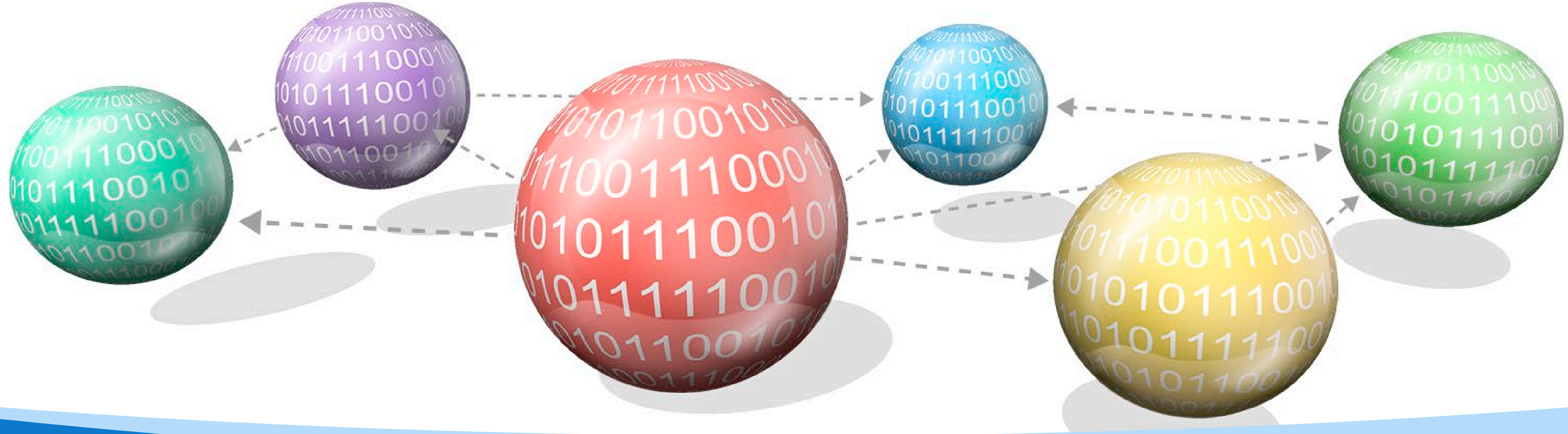

SC/CZ/CE2002 Object-Oriented Design & Programming

Assignment FAQ

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FAQ on 1 April, 2025

Q: I noticed that the assignment PDF specifies, "No database application (e.g., MySQL, MS Access, etc.) is to be used." I would like to clarify whether storing and reading data from Excel files (.xlsx) or text files (.txt) is allowed for the SC2002 BTO assignment.

Ans: Yes. storing and reading data from csv, Excel files (.xlsx) or text files (.txt) are allowed.

Q: For the filtering of flat type, project , let's say we filter by room, does that mean 2 room / 2 room / 3 room descending, or must we have the option to filter by 2 rooms and 3 rooms?

Ans: filter by roomtype means just showing the results of that specific roomtype (so if we filter by 2 rooms, then it shows only 2 room flats. Filtering by 2 rooms/3 rooms is a must to have feature. Sort descending can be your additional feature.

Q: For the withdrawal request, is it only made after the application?
What happens if the withdrawal request is unsuccessful?

Ans: Assume it is always successful. Although "Manager is able to approve or reject Applicant's request to withdraw the application in case of special situation. But normally, withdrawal is always successful.

Regarding the UML sequence diagram for the assignment, I would like to clarify whether "Showing the flow of the HDB Officer's role in applying for a BTO".

Does this mean that we are supposed to show the HDB Officer applying for a BTO as an applicant?   Or does this mean we are supposed to show the HDB Officer handling the BTO application created by another applicant, as an officer?

Ans: Based on the assignment details and your design, draw a sequence diagram of the HDB's officer's own application - starting from eligibility check to successfully booked.

QThe second part should be applying to register as a HDB officer for a project through the HDB manager.

Ans: The sequence diagram should also include the HDB's officer registration process to handle a project, that he has not applied to be applicant - starting from eligibility check to successfully registered to be a HDB officer of a project. The sequence diagram no need to include their responsibilities such as updating Applicant's status to "Booked", etc.

Q: According to the requirements of the project guideline, I need to submit UML (class and sequence diagram) in picture format. Then the project report needs to be a PDF within 12 pages. However, the number of UML pictures in the design is very large. If I put them in the PDF, I am afraid that it will not fit in 12 pages. Should I use a separate folder to include these UML pictures in picture format?

Ans: Separate submission for UML diagram.

Q: Is it true that every applicant can submit an enquiry to ask about any projects, regardless of whether they have applied to a project or not?

Ans: Applicants are able to enquiry to ask about any projects he/she can view.
Yes, regardless if he/she have applied to the project already or not.

Q: How do we know which are the interactions for which we need to draw a sequence diagram?

Ans: Basic requirement: Based on the assignment details and your design, draw a sequence diagram of the HDB's officer's own application - starting from eligibility check to successfully booked and become a HDB officer of another project.

Choose your own complicated use case as additional SD.

Q: **Can I also confirm if we need to differentiate between the boundary, control and entity classes or just regular shapes is sufficient.**

Ans: No mandatory. You may decide if you would like to demonstrate your knowledge.

Q: **Are we required to apply all five principles to every class, or is it sufficient to demonstrate each principle at least once across different classes in the project?**

Ans: It is sufficient to demonstrate each principle at least once across different classes in the project.

Q: **1. Would adhering to these principles be a requirement, or is it optional as long as the solution is functional?**

Ans: It is a requirement.

Q: **Are we required to incorporate all five SOLID principles into our project, or can we selectively implement some?**

a. Is there a recommended number of principles that we should aim to incorporate?

Ans: Need all 5.

Q: **For the usage of OO concepts and principles mentioned in Design Considerations, is it recommended that we make use of all the concepts taught (e.g. down casting, polymorphism, etc.) ?**

Ans: Not mandatory.

Q: In the brief for the SC2002 group assignment, the deliverables say to prepare only 1 Sequence diagram; specifically the use case "Showing the flow of the HDB Officer's role in applying for a BTO and register to handle a project."

However in the recording of your week 9 lecture, you mentioned that you'd recommend at least 2 - 3 sequence diagrams. Can I check which is the correct set of requirements?

Ans: That one is the minimum requirement. I would like to encourage you to work on 2-3 based on your selected test case.

- **No database application** (e.g., MySQL, MS Access, etc.) is to be used.
- **No JSON or XML** formats are to be used.

Q: Do we need to strictly follow the order, properties and names of the data columns in the supplied .xlsx files or can we introduce new data columns in our own implementation?

Ans: You can include new data columns in your own implementation.

Q: **Are we allowed to change the excel file format from .xlsx to .csv? This is because it is easier to retrieve and write data to .csv files. The project PDF only mentioned no JSON/XML format allowed.**

Ans: You are allowed to change the excel file format from .xlsx to .csv.

The sample data file for user list is given in excel in assignment folder. You can

- **Use them directly,**
- **Or copy the content to text file if you plan to read from text file,**
- **Or make your own data files.**

Q: Are we allowed to use design patterns such as Singletons in our solution?

Ans: Yes. You can use design patterns.

Q: Can we import any external libraries to aid our solution, or are there any specific restrictions on this?

Ans: It depends on which library you want to import. The libraries for data management are not allowed.

Applicants

Q1. When an applicant views a project, is it expected that they see the number of available units?

A: Yes.

Q2. Should a single applicant be able to view 3-Room unit details (e.g., unit number and price) in the "View Projects" section?

A: Applicants can only view the list of projects that are open to their user group (Single or Married). The current design hides 3-Room details from single applicants.

Q3. When a single applicant applies for a project, should the system automatically set the flat type to 2-Room (without offering a choice for 3-Room)?

A: Yes. Applicants can only apply for projects they are able to view. No viewing rights = Not eligible to apply = Cannot apply.

Q4. Once an enquiry has been replied to, should the applicant still be able to edit or delete it?

A: No. Once replied, the enquiry should not be editable or deletable by the applicant.

Q5. Is it required to include a timestamp for each enquiry (and its reply)?

A: You may decide based on your design.

Q6. If a project has zero available units for 2-Room flats, should the system still display that project to single applicants?

A: You may decide based on your design. You can either simply show no available flats or show those taken flats for their reference.

For Officers

Q1. Can an officer unregister (cancel their registration) for a project after registering?

A: No.

Q2. When officers reply to enquiries, do we need to capture additional details such as a timestamp and the officer's name?

A: You may decide.

Q3. Should receipt generation be available only for applications with a successful (BOOKED) outcome, and only include applicants under the officer's own project?

A: Yes. Receipts should only be generated when the application status changes from SUCCESSFUL to BOOK. Only the HDB officer handling the project can update the status for applicants booking a unit in that same project.

For Managers

Q1. When creating a project, must the project name be unique? (We are currently not using a unique project ID.)

A: Yes, the project name should be unique.

Q2. Regarding the application period (opening and closing dates): How does the system determine if a project is open or closed?

A: The system will use the current date. Design your demo to reflect this.

Q3. Should a project automatically close when the closing date is reached? What should happen to the project after that?

A: Yes. After the closing date, the project should no longer be visible for new applications. However, applicants who have already applied should still be able to see the project listing. What happens beyond that can be based on your design.

Q4. Our sample data includes projects with past dates. Should we assume those projects are still open?
A: You may change the sample dates as needed to suit what you want to showcase in your demo.

For Filtering

Q1. Is it acceptable to use a searchable interface to filter by criteria such as neighborhood, flat type, marital status, age range, and price sorting?

A: Yes, that is acceptable.

Data files

Q: Regarding CSV file usage:

- Should CSV files be used only for initial system setup (importing initial staff list and project list as mentioned in the requirements)?
- Or can CSV files also serve as a persistent data store throughout program execution, where we can read and write user data during runtime? This will ensure the changes to be saved even after the program terminates.

Ans: Used for both.

Q: Is it required for our project to save information between executions (data persistence)?

Ans: Yes. Unless you have justification for a different design.

Design

Q: SOLID Principles: As we are adhering to the SOLID principles, we have noticed that the number of our interfaces and classes is increasing to maintain specificity. Is this acceptable? Additionally, when justifying our application of the SOLID principles in the report, should we list every instance of usage or only a few key examples?

Yes. only a few key examples will do.

Q: Can I clarify whether we have to read/write to the original xlsx files given? Or can we just use the data and read/write using our own formats?

Ans: Yes. You can define your own format.

Q: How strict is the input checking for the project? Will test cases intentionally include invalid inputs to check how the system handles them, or is the focus primarily on standard valid inputs?

Ans: Input validation is a must.

Q: For the project presentation, do we have to create slides or can we do it on google collabs/ Jupyter Notebook like how it is done in SC1003?

Ans: There are no restrictions on the presentation style as long as it effectively showcases your work.

- Not allowed to edit the project details.
- Able to view and reply to enquiries regarding the project he/she is handling
  - With Applicant's successful BTO application, HDB Officer's flat selection responsibilities:
    - Update the number of flat for each flat type that are remaining
    - Retrieve applicant's BTO application with applicant's NRIC
    - Update applicant's project status, from "successful" to "booked".
    - Update applicant's profile with the type of flat (2-Room or 3-Room) chosen under a project

Q: May I clarify what these 2 bullet points mean? My group is confused as we feel that they are contradictory to each other (ie first bullet point said "not allowed to edit project details", while the second bullet point talked about updating details such as remaining flats).

Ans: Only manager can edit details, e.g., location, number of flats in each category. HDB Officer has the rights to manually change the application status to "Booked" for the successful applicant. Updating count, updating Applications Profile and generating booking details mainly should be done automatically by the system.

Under the section for HDB manager, the handling of one project “during an application period” seems unclear as it does not specify what consists under “handling a project”.

As there is an application period for each HDB BTO project, we were confused whether a HDB manager no longer touches a project after the project application period, as approving and rejecting applications for the project seems to be considered under “handling a project”, and it makes more sense that this only happens after the application deadline is over.

So, does this mean that there are multiple projects with overlapping application timelines, and a HDB manager can only take **one “active”** project at a time when its applications are open, but can still handle **multiple** projects after the application deadline, such as approving applications and rejecting withdrawals and handling enquiries (eg. handle 3 projects from the past with visibility off and only 1 project with visibility on currently)

Ans: A HDB manager can only take **one "active"** project at a time when its applications are open, but can still handle **multiple** projects after the application deadline, such as approving applications and rejecting withdrawals and handling enquiries (eg. handle 3 projects from the past with visibility off and only 1 project with visibility on currently).

HDB Manager will not be able to create a new project if he/she already has an active project within the application period.

Definition of "Active": Visibility turned ON + Within application period (application start date to application end date, both inclusive)

Q1. How should enquiries work? Suppose an applicant has multiple enquiries—should they submit multiple separate enquiries, or should it be treated like a conversation/chat?
A: No, it should not be treated like a conversation/chat. If an applicant has multiple enquiries, they must submit multiple separate enquiries.

Q2. What should happen to applications with approved withdrawals? Should the application be deleted (i.e., no longer visible to the applicant), marked as "Unsuccessful", or handled differently?

A: If a withdrawal is approved after the application was successful, the status should be changed to "Unsuccessful". However, the applicant should still be able to view the project. As long as an application was submitted, the applicant will be able to see the project listing—regardless of its current visibility or the application status.

Q3. Regarding the requirement: “With Applicant’s successful BTO application, HDB Officer’s flat selection responsibilities”—should actions such as updating the unit count, changing the status to "Booked", and updating the Application Profile be performed automatically, or manually by the HDB Officer?

A: The HDB Officer must manually change the application status to "Booked". Once that is done, the system can automatically handle updates such as unit count adjustment, Application Profile update, and generation of booking details.

Q4. When HDB Officers update application statuses, must the status transitions follow a specific order (e.g., Pending → Success → Booked), or can they skip or revert statuses (e.g., Pending → Booked or Success → Pending)?

A: Status transitions must follow a defined order:

- Valid: Pending → Success → Booked
- Not allowed: Pending → Booked or Success → Pending
- For unsuccessful applications: Pending → Unsuccessful
- For withdrawals before booking: Pending → Success → Unsuccessful
- For withdrawals after booking: Pending → Success → Booked → Unsuccessful

Q5. Regarding the requirement: “Able to generate receipt of the applicants with their respective flat booking details – Applicant’s Name, NRIC, age, marital status, flat type booked and its project details” — should this receipt be generated automatically upon status change to "Booked"?

A: The HDB Officer must manually change the status to "Booked". After that, the system can automatically handle the generation of booking details and receipt, along with updating the unit count and the Application Profile.

Q6. Regarding the rule “Can only be handling one project within an application period (from application opening date to closing date)”, if an HDB Manager is already managing an active project, can they create another project during the same application period?

A: No, an HDB Manager cannot create a new project if they are already managing another project that is active within the same application period.

Q7. The specification says HDB Managers are "Able to view enquiries of ALL projects." Does this include projects they are not managing?
A: Yes, HDB Managers can view enquiries for **all projects**, including those that they do not manage.

Q8. Regarding the requirement "Highlight clearly any additional features/functionalities implemented in the system" (from section 5c), how will this be factored into grading?
A: Marks will be awarded for innovation and creativity. Any additional features or functionalities added to the system will contribute to the overall grade based on their usefulness and originality.

Report

Q: For the report for our group project, could you confirm which platform we should use (MS Word, PowerPoint, Jupyter Notebook, etc).

Ans: MS Word.

Q: Our team's UML diagram is quite big to fit on an A4 size page. The details might be very small or blurry. I just want to double confirm with you if we attach our UML diagram in a separate PDF file with a better resolution.

Ans: Yes. Can.

<u>THE DELIVERABLE (Deadline:One day before your scheduled oral with your TA) Your group submission should include the following:</u>

a. The report (separate diagram file if diagram is unclear in report)

OOP Group Assignment Deliverables

- ☐ Implementation Code and Java Documentation (javadoc)
- ☐ Main Report (separate diagram file if diagram is unclear in the report)
- ☐ Data Files
- ☐ Declaration of Original Work form
- ☐ Declaration on use of GAI form
- ☐ Other Relevant files (eg: setup instruction, etc)

Students must compile ALL the required files from the checklist into a single zip file for submission.
File naming convention:**LabGroupName_AssignmentGroupNumber.zip**.

Upload this zip file to your individual SC/CE/CZ2002 LAB site (eg FEP1, FSP1, etc) in NTULearn. The submission link is provided on the left panel "Assignment Submission". **Only one submission is required per group.**


Q&A