INSTRUCTIONS - PRACTICAL EXAM – PRO192
- PLEASE READ BEFORE STARTING YOUR EXAM

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Software Requirements

- Netbean 8.x or later, JDK 1.8 (Java 8), Notepad, Command Prompt, WinRAR / WinZip with Windows Explorer (File Explorer) on Windows 7 and above.

Students are ONLY Allowed to use:

- His / her study materials like sample codes and program examples are stored on his / her computer only.

Instructions

1. Create a folder to save given projects, e.g. PRO_given [1]. Download the given materials to [1].
2. Steps to do question 1 (do the same for other questions): Open NetBeans, open the given Q1 project, then complete it according to the requirements in the exam. (Do not: delete or edit given files, or create a java file with the same name as given files).
3. Before submission: Run the function **"Clean and Build Project"** (Shift+F11), then rename the folder dist to RUN (or run). If the folder RUN already exists, delete it before renaming it.
4. **Submission:** to submit the project Q1, first you must select Question No = 1, browse and select the project folder (e.g. 1, Q1, or Q1X,...) then click the **Submit** button. Do the same for other questions. **Do not submit** the unedited given project.
5. **Do not use accented Vietnamese** when writing comments in programs.

❖ **Troubleshooting**:
If the given project (e.g. Q1) runs with an error, you need to run "Clean and Build Project" (Shift+F11). If still an error, try to rename the project, e.g. from Q1 to Q1X or Q1Y,... If the size of the project is too large for submission, try to delete the folder "build".

Note:

- Solutions will be marked by Automated Marking Software.
- The use of tools other than those allowed in the above section whether intentionally or unintentionally, is considered a violation of the exam rules, and the exam result will be 0.
- Do not change the names of the folders and files specified (or required) in the exam. If you change it (incorrectly), the marking software can not find the execute file (.jar) to mark, thus the exam result will be 0.
- **All source code files .java in the projects will be created in the default package of the NetBean**

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❖ **Question 1: (2 marks)**

Do not pay attention to the real meaning of objects, variables, and their values in the questions below
Write a class **Apartment** (in the default package of the NetBean) with the following information:

Apartment
- id: int; - name: String; - price: double;

Where:

- Apartment() - default constructor.
- Apartment(id: int, name: String, price: double, numberOfBedrooms: int) -

- numberOfBedrooms: int;
+ Apartment() + Apartment(id: int, name: String, price: double, numberOfBedrooms: int) + getName(): String + getPrice(): double + getFinalPrice(taxPercentage: double): double + toString(): String

constructor, which initializes id, name, price, numberOfBedrooms of the Apartment.

- getName(): String – returns the name of the apartment with the first letter capitalized and the rest lowercase
- getPrice(): double – returns the price of the apartment. If the number of bedrooms is greater than or equal to 2, the return price will be subject to an additional fee of 10% of the price.
- getFinalPrice(taxPercentage: double): returns the value of getPrice() and adds the tax amount based on the given parameter.
- toString():String - the output is the apartment name in uppercase, followed by a colon and getPrice() result. The price formatted to two decimal places.

Do not format the result. The program output might look something like this:

Enter id: 1 Enter name: Chung cu Man Thien Enter price: 15000 Enter number of bedrooms: 1 1. Test getPrice() 2. Test getName() 3. Test getFinalPrice() 4. Test toString() Enter TC(1|2|3|4): 1 OUTPUT: 15000.00	Enter id: 2 Enter name: Vinhome Enter price: 30000 Enter number of bedrooms: 3 1. Test getPrice() 2. Test getName() 3. Test getFinalPrice() 4. Test toString() Enter TC(1|2|3|4): 1 OUTPUT: 33000.00	Enter id: 3 Enter name: king crown infinity Enter price: 25000 Enter number of bedrooms: 2 1. Test getPrice() 2. Test getName() 3. Test getFinalPrice() 4. Test toString() Enter TC(1|2|3|4): 2 OUTPUT: King crown infinity
Enter id: 4 Enter name: the navita Enter price: 15000 Enter number of bedrooms: 2 1. Test getPrice() 2. Test getName() 3. Test getFinalPrice() 4. Test toString() Enter TC(1|2|3|4): 3 Enter tax percentage: 10 OUTPUT: 18150.00	Enter id: 5 Enter name: RiverView Enter price: 10000 Enter number of bedrooms: 2 1. Test getPrice() 2. Test getName() 3. Test getFinalPrice() 4. Test toString() Enter TC(1|2|3|4): 4 OUTPUT: RIVERVIEW:11000.00	