

Subject: PR0192

LAB 02

Mỗi Program tạo 1 project riêng có tên theo quy định sau:

Tên Project: <MASV>_Program**XX**

Bước 1: Ví dụ: Sinh viên có masv: CE123456. Tên Project được đặt tên như sau:

CE123456_Program**01**

CE123456_Program**02**

CE123456_Program**03**

CE123456_Program**04**

CE123456_Program**05**

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Bước 2: Tạo 1 file MS Word và chụp kết quả (*Tất cả màn hình của IDE Netbean 8.2*) của 8 chương trình, dán vào file.

Bước 3: Nén tất cả bài làm lại với tên: Lab2.zip

Bước 4: Sau đó submit bài làm (submit.zip hoặc submit.rar) vào mục **Lab02 đúng Slots** trên trang <https://edunext.fpt.edu.vn/>

Yêu cầu:

- Comment giải thuật đầy đủ,
- Ghi thông tin tác giả (author): MSSV, Họ tên, lớp
- Format code
- Tạo file .jar cho từng project

Contents: 08 programs

Program 1 (1 marks)

Ask the user to enter a word.

Your code must check if the word starts with the letter 'A' or 'a' and print a message accordingly.

Example 1:	Please enter a word: apple Yes, it starts with a lower case 'a'.
Example 2:	Please enter a word: Albatross Yes, it starts with an upper case 'A'.
Example 3:	Please enter a word: blue No, it does not start with upper or lower case 'a'.

Program 2 (1 marks)

Ask the user to enter a colour.

Your code must print the first and the third letters in the color.

<i>Example 1:</i>	Please type a color: Blue The first letter is B The third letter is u
<i>Example 2:</i>	Please type a color: Yellow The first letter is Y The third letter is l

Program 3 (1 marks)

Ask the user to enter their first name and their last name (surname).

Your code must print their initials (in upper case) as shown.

<i>Example 1:</i>	Please enter your first name: kim Please enter your last name: loddo Result: K.L.
<i>Example 2:</i>	Please enter your first name: freddy Please enter your last name: plumber Result: F.P.

Program 4 (1 marks)

Ask the user to enter a name and a number.

Your code must print the character at the number provided.

<i>Example 1:</i>	Please enter a name: Susan Please enter a number: 3 The letter at position 3 is a
<i>Example 2:</i>	Please enter a name: Johnathan Please enter a number: 8 The letter at position 8 is n
<i>Example 3:</i>	Please enter a name: Bob Please enter a number: 8 Sorry, that number is to big.

Program 5 (1 marks)

Ask the user to enter a word and a sentence.

Your code must check if the word can be found inside the sentence.

<i>Example 1:</i>	Please enter a word: dog Please enter a sentence: The Dog barked at me! The word 'dog' is in the sentence
<i>Example 2:</i>	Please enter a word: cat Please enter a sentence: The lion has an orange mane. The word 'cat' is not in the sentence.
<i>Example 3:</i>	Please enter a word: BOD Please enter a sentence: bob the builder does amazing work! The word 'BOD' is not in the sentence.

Program 6 (1 marks)

Ask the user to enter a sentence that contains the word red within it.

Your code must replace all occurrences of red with blue, and print the modified sentence.

Hint: You must use the replace method.

<i>Example 1:</i>	Please enter a sentence: The red car stopped at the traffic light Please enter a color: blue The blue car stopped at the traffic light
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<i>Example 2:</i>	Please enter a sentence: The blue car stopped at the traffic light Please enter a color: white There is no 'red' word in the sentence
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Program 7 (1 marks)

Your task is to create a program that checks the validity of a password entered by the user.

The user will enter a password (which your program will store in a variable).

Your program must check this password against the following rules:

- Must be at least 8 characters long.
- Must not contains any spaces.
- Must begin with an uppercase letter G.

Your program must check the validity of the password entered against the above rules.

It must tell the user if they entered a valid password.

If not, it must tell the user which of the rules their password did not meet.

<i>Example 1:</i>	Please enter a password: Kelly Your password is too short. Your password does not start with a 'G'.
<i>Example 2:</i>	Please enter a password: G R E A T WORK Your password contains spaces.
<i>Example 3:</i>	Please enter a password: Hi Bob Your password is too short. Your password contains spaces. Your password does not start with a 'G'.
<i>Example 4:</i>	Please enter a password: Gollycrumbschief Well done. You entered a valid password.

Program 8 (3 marks)

Write a program that lets the user type in names. Each name that is entered should be stored in an ArrayList of type String. When the word "quit" (ignore case (upper or lower)) is entered then the program should stop inputting names.

Print a list of all contestants using a “for each” loop to display the contents of your ArrayList.

Then your program should generate a random number that could be any entry in the ArrayList and print out the name of the lucky winner. Hint: You must use the `get()` method.

<i>Example 1:</i>	Please enter a name (quit to exit!): quit The player list is empty!
<i>Example 2:</i>	Please enter a name (quit to exit!): Dang Van Lam Please enter a name (quit to exit!): Bui Tien Dung Please enter a name (quit to exit!): Doan Van Hau Please enter a name (quit to exit!): Que Ngoc Hai Please enter a name (quit to exit!): Nguyen Quang Hai Please enter a name (quit to exit!): Do Hung Dung Please enter a name (quit to exit!): Nguyen Hoang Duc Please enter a name (quit to exit!): QUIT List of players: 1. Dang Van Lam 2. Bui Tien Dung 3. Doan Van Hau 4. Que Ngoc Hai 5. Nguyen Quang Hai 6. Do Hung Dung 7. Nguyen Hoang Duc #. List of players with the last name 'Nguyen': 1. Nguyen Quang Hai 2. Nguyen Hoang Duc #. List of players named 'Dung': 1. Bui Tien Dung 2. Do Hung Dung

	#. The name of the lucky winner: Que Ngoc Hai
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END