OBJECTIVES

1. Experiment with the learned keywords in small programs so the subjects soak a bit.

GENERAL INFORMATION

Nothing to point out. See lecture slides for information.

EXPERIMENT

1. Write a function declared as
   ```c
   void Generate(double A, double B, int N);
   ```
   that generates N random numbers between A and B and print them on the console. In an infinite for loop in function `main()` ask user to enter parameters A, B and N and call `Generate` function afterwards.
   You should have your console output look like the example format given below (A=10, B=15, N=12).
   ```
   Enter [A,B) limits : 10 15
   Enter the number of numbers to be generated : 12
   0. 10.006256
   1. 12.817927
   2. 10.966521
   3. 14.043703
   4. 12.925047
   5. 12.399365
   6. 11.751457
   7. 14.479812
   8. 14.114200
   9. 13.733024
   10. 10.870540
   11. 14.294717
   Enter [A,B) limits :
   ```
   When user enters numbers such that A>=B or N<=0 the loop is exited and consequently program is terminated.

2. Create a function declared as `void GenVowel(void);` that when called, randomly prints one of AEIOU characters. When called 20 times, for example, you should see something like
   ```
   EIUAUUOOIUAAEIEEAIIE
   ```
   on the screen. Use `rand()`, % operator and switch keyword in the function. Test it.
   Create another function declared as `void GenChar(void);` that when called, randomly prints a capital letter on the screen. When called 60 times, for example, you should see something like
   ```
   PHQGHUMEAYLNLFDFIRCTRSCVXGGBKFNQDUXWOFZVSTKJPREPGGXPRNRY
   ```
   on the screen. Use `rand()`, % operator and get help from ASCII table to print characters using %c formatting. Test it.

3. Now change your main() function to generate a 20x40 character matrix on the screen by calling `GenChar()` and `GenVowel()` functions with probabilities of 0.5 each. It should look like (first 4 lines are shown) the example below.
   ```
   EHUGUUOEIYANEFFAXIICESIXIGEWOIFIEUUWINAO
   ZESOTUJEROPUGRUNENOSAMICESIYQAAEUIAEFO
   UNUMKEESWURENIKOCUFOTUSUYISOAEFUOAFAZIC
   OAJEYVUBIYAPEUEALEPINILLOVUVOPAOEYHAQEOQA
   ```
   Notice that vowels and consonants distribute evenly. Do this by using two nested for loops, % operator, `rand()` function and if keyword.

Turn in all your code as your report.