

CS111
Assignment 5
(for loop)

1. The iteration expression in a *for* loop need not always alter the loops control variable by adding or subtracting a fixed amount. Instead, the loop control variable can change in any arbitrary way. Using this concept, write a C++ program that uses a for loop to generate and display the progression 1, 2, 4, 8, 16, 32, and so on until 20 numbers are printed just by changing the value of the loop's control variable (for example, int i) without any calculation in the loop. Print 5 numbers per line with a blank space between adjacent numbers.
2. Print all the multiples of n less than 100 with n numbers per line using *for* loop.
 - Program prompts the user to enter an integer less than 10.
 - Program terminates if invalid number is entered.
 - Program then prints all multiples of n less than 100 using *for* loop.
 - There should be n numbers per line.

Program output for question 1 should look similar to the following:

```
1 2 4 8 16
32 64 128 256 512
1024 2048 4096 8192 16384
...
```

Program output for question 2 should look similar to below:

```
Please enter an integer less than 10: 5
Multiples of 5 under 100 with 5 numbers/line
5 10 15 20 25
30 35 40 45 50
55 60 65 70 75
80 85 90 95 100
```

