

Beginning C Programming for Engineers

Homework Set 1

Name: _____

As always, please follow the guidelines for homework submissions shown in the last slide from lesson one, *or credit will be deducted*. Each study group should turn in a single copy of the homework.

1. Write a paragraph explaining the difference between *source code* and *object code*. Explain what tools you use to create each.
2. Write down an algorithm for bathing a cat. Please do not write a program! And please, don't drown the cat.
3. Write a program to print the initials or name of *each member* of your study group as a picture. For example, I might want a program that displays:

```
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```

4. Write a program that prompts you for the circumference of a circle, reads that value into a variable, and prints out the area of the circle. You will need an approximation of π for this program; please use $\pi \approx 3.14159$. Use appropriate types for your variables!
5. Examine this program:

```
#include <stdio.h>

int main()
{
    int base, height, area;
    area = (1/2) * base * height;
    printf("Enter base, height: ");
    scanf("%d, %d", &base, &height);
    printf("Area = %d\n", area);
    return 0;
}
```

This program is supposed to get the base and height of a triangle, and calculate its area. But it is severely broken. Please fix it.

You will probably find it helpful to actually type in this program. If you enter it as shown, it should compile. However, it will produce incorrect results, until you fix it.