Practice Exercise #02: Distance Conversion

http://www.comp.nus.edu.sg/~cs1020/4_misc/practice.html

Reference: Week 1 Java Basics

Objectives:

1. Converting a simple C program to Java program
2. Input/output in Java
3. Using constant
4. Review Java naming convention

Task statement:

In CS1010 Week 2 example 3[†], we show a C program to convert miles to kilometers. The program is given below.

```
// Converts distance in miles to kilometers.
#include <stdio.h>
#define KMS_PER_MILE 1.609

int main(void) {
     double miles, kms;

     printf("Enter distance in miles: ");
     scanf("%lf", &miles);

     kms = KMS_PER_MILE * miles;
     printf("That equals %9.2f km.\n", kms);

     return 0;
}
```

The Python version is given on the next page. Both programs are available on the "CS1020" → "Miscellaneous" → "Practice Exercises" web page.

Convert the program into a Java program **MileToKm.java**.

Use a constant in your program. (Note that CodeCrunch is unable to detect if you have used a constant. Make sure you do use one, and adhere to **Java naming convention**[‡] for constants – constant names should be in uppercase characters, with words separated by underscore.)

[†] Lecture slides for CS1010 are available on http://www.comp.nus.edu.sg/~cs1020/4_misc/cs1010_lect.html

[‡] http://en.wikipedia.org/wiki/Naming_convention_(programming)

```
# mile_to_km.py
# Converts distance in miles to kilometers.

import sys

# main function
def main():
     KMS_PER_MILE = 1.609
     miles = float(raw_input("Enter distance in miles: "))
     kms = KMS_PER_MILE * miles

     print "That equals %9.2f km." % kms

# Runs the main method
if __name__ == "__main__":
     main()
      sys.exit(0)
```

Sample runs:

```
Enter distance in miles: 28.7
That equals     46.18 km.

Enter distance in miles: 371.5
That equals    597.74 km.
```