Exercise 2.4

1) Consider the type definition typedef struct { int degree; int capacity; float* coef; } dpolynomial; where coef is the dynamically allocated one-dimensional array coef[0:capacity-1]. Compare this representation for polynomials with the one using the type polynomial.

polynomial

- The terms array which stores all the polynomials as coefficients and their corresponding exponents have statically allocated size via MACRO. The MAX_TERMS value may be continuously increased as one keeps on increasing the terms.
- More efficient in terms of space when polynomial is sparse, i.e. many 0 coefficients.

dpolynomial

- The size of the coef array entirely depends on the user input at run-time.

More efficient in terms of space when polynomial is dense.

2) Write functions readPoly and printPoly that allow the user to create and print polynomials.