Functions

1. As an introduction to functions, write a program that consists of main and a function called printme(), which takes no parameters, and simply prints your name and address on the screen.
   HINT: Keep it simple, and don't forget the function prototype!

2. Write a program that consists of main and a function called printsum(), which takes 2 integers as input, and prints their sum.
   The function printsum() should have the following prototype:

   ```
   void printsum (int num1, int num2);
   ```

   Test the program by passing various pairs of numbers into printsum()

3. Extend your program to include the function printprod(), which also takes 2 integers, but prints their product.
   The function printprod() should have the following prototype:

   ```
   void printprod (int num1, int num2);
   ```

   Test the program as before, by calling printsum() and printprod() with various pairs of integers.

4. Finally, modify printsum() and printprod() so that the functions receive doubles, not integers. The functions should now have the following prototypes:

   ```
   void printsum  (double num1, double num2);
   void printprod (double num1, double num2);
   ```

5. Design and code a program which takes two numbers from the user and prints out the squares, cubes and fourth powers of the integers between them.

   Use functions with prototypes :

   ```
   void printtable (int, int);
   void printsquare(int);
   void printcube  (int);
   void printquad  (int);
   ```

   where the last three functions are called from printtable.

6. Design and code a program which consists of main and a function called smaller which has the prototype:

   ```
   int smaller(int, int);
   ```

   Two integers are input by the user which are passed to the smaller function. This returns the smaller of the two, which then gets printed out.

7. Extend your program to include the function larger, prototype:

   ```
   int larger (int, int);
   ```

   The two integers are input as before, but the user is also prompted to enter a third value:
   ```
   enter  1  to display the smaller value
   enter  2  to display the larger  value
   ```
   The required number is output.

8. Re-design the above question with one function replacing printsquare, printcube and printquad. The prototype is:

   ```
   void printpower(int, int);
   ```

   where the extra argument supplies the required power, eg. printpower(3,6) is the same as printcube(6) ie. both print out the cube of 6 (which is 216).