Creating a static library

This example creates a static library libAddSub.a, which is a static library that has two functions

- **int add(int, int) – adds to integers and returns the result**
- **int sub(int a, int b) -- subtract returns the result of (a – b)**

We will use these functions in our own program called **testAddandSub.c**

1. Create add.c
2. Compile

   ```
   gcc -g -c add.c  # this creates a object file add.o
   ```

3. Create sub.c
4. Compile

   ```
   gcc -g -c sub.c  # this creates a object file sub.o
   ```

5. Now create an archive (a static library) containing the two object modules

   ```
   ar rcs  libAddSub.a add.o sub.o          # this creates are static library
   ```

6. Create a header file to place our function prototypes in

   addSub.h

7. Now use our static library in our own program testAddandSub.c
   - Create testAddandSub.c

8. Now to create your executable compile and link your program testAddandSub.c with our library libAddSub.a

   ```
   gcc -g testAddandSub.c -o testAddandSub -L./ -lAddSub
   ```

Note:
-lAddSub --- that's a lower case L