CSE 2312: Programming Assignment 1

Write assembly functions that implement the following C functions:

1. uint64_t add64(uint64_t x, uint64_t y) // returns x + y
2. uint64_t sub64(uint64_t x, uint64_t y) // returns x - y
3. uint16_t minU8(uint8_t x, uint8_t y) // returns the minimum of x, y
4. int16_t minS8(int8_t x, int8_t y) // returns the minimum of x, y
5. bool isLessThanU32(uint32_t x, uint32_t y) // returns 1 if x < y, 0 else
6. bool isLessThanS32(int32_t x, int32_t y) // returns 1 if x < y, 0 else
7. uint32_t shiftLeftU32 (uint32_t x, uint32_t p) // returns x << p = x * 2^p for p = 0 .. 31
8. uint32_t shiftU32(uint32_t x, int32_t p) // return x * 2^p for p = -31 .. 31
9. int32_t shiftS32(int32_t x, int32_t p) // return x * 2^p for p = -31 .. 31
10. bool isEqualU16(uint16_t x, uint16_t y) // returns 1 if x = y, 0 if x != y
11. bool isEqualS16(int16_t x, int16_t y) // returns 1 if x = y, 0 if x != y
12. void stringCopy(char* strTo, char* strFrom) // copies strFrom to strTo
13. void stringCat(char* **strFrom**, char* **strTo**) // adds **strFrom** to end of **strTo**

All of the functions above should be present in a single .s file. The function/procedure names must be identical to that presented above, as your code will be tested with generic C code used by the TAs.

Submit your assignment via the submission link on Canvas. The name of this file should be **lab1_lastname_loginID.s**. Example: If your name is John Doe and your login ID is jxd1234, your submission file name must be "lab1_Doe_jxd1234.s".