

**CmpE102**  
**Spring 2017**  
**Programming Assignment 2**

**Due Date:** 6 Mar. 2017

Do this assignment individually.

Construct a “sandbox” program template and run the following short instruction sequences in GDB or your choice of debugger. Single-step and use register display to determine the result. Print the results as screenshots and provide a brief explanation of the results.

Note that these are all byte operations.

```
1. mov al, 01101111b  
   and al, 00101101b
```

```
2. mov al, 6Dh  
   and al, 4Ah
```

```
3. mov al, 00001111b  
   or  al, 61h
```

```
4. mov al, 94h  
   xor al, 37h
```

```
5. mov al, 7Ah  
   sub al, 67h
```

```
6. mov al, 3Dh  
   add al, 34h
```

```
7. mov al, 9Bh  
   not al
```

```
8. mov al, 37h  
   neg al
```

Note: You should also be able to do these calculations on paper.