CSI 402 – Systems Programming – Handout 8.3
Example for Program Linking

Note: This handout shows two SIC/XE program segments in two separate files. Each file defines some external symbols and uses some other external symbols. For convenience, the LC values are also shown. (These values are not part of the file.)

File: `main.asm`

```
LC Value
--------

          MAIN     START   0
                   EXTREF  SORT,SEARCH      #External symbols needed.
                   EXTDEF  SYMTAB           #External symbol provided.
                     .
                     .
  45               +JSUB    SORT
                     .
                     .
  90               +JSUB    SEARCH
                     .
                     .
 120               +JSUB    SORT
                     .
                     .
 215     SYMTAB     RESW     400
                     .
                     .
```

EDT for `main.asm`:

Symbol	Relative Address
SYMTAB	215

ERT for `main.asm`:

Symbol	Relative Address
SORT	46
SEARCH	91
SORT	121

```
LC Value
--------

    0        FUNCT   CSECT
                     EXTREF  SYMTAB         #External symbol needed.
                     EXTDEF  SORT,SEARCH    #External symbols provided.
                       .
                       .
   70                +LDA    SYMTAB
                       .
                       .
  125        SORT    STA     VAL1
                       .
                       .
                     RSUB
  300        SEARCH  STA     VAL2
                       .
                       .
                     RSUB
```

EDT for `funct.asm`:

Symbol	Relative Address
SORT	125
SEARCH	300

ERT for `funct.asm`:

Symbol	Relative Address
SYMTAB	71