Task 1 Test Plan

Memory used for Task 1 (pre execution):

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source\_Array | | | | | Destination\_Array | | | | | Additions | |
| $1000 | $1001 | $1002 | $1003 | $1004 | $1005 | $1006 | $1007 | $1008 | $1009 | $100A | $100B |
| $06 | $55 | $2C | $7A | $07 | -- | -- | -- | -- | -- | -- | -- |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Instruction** | **A** | **B** | **D** | **Additions** |
| ldd #0 | $00 | $00 | $0000 | $---- |
| std Additions | $00 | $00 | $0000 | $0000 |
| **Pass 1** | | | | |
| ldab 1,x- | $00 | $07 | $0007 | $0000 |
| stab 1,y+ | $00 | $07 | $0007 | $0000 |
| clra | $00 | $07 | $0007 | $0000 |
| pshd | $00 | $07 | $0007 | $0000 |
| ldd Additions | $00 | $00 | $0000 | $0000 |
| addd 0,sp | $00 | $07 | $0007 | $0000 |
| std Additions | $00 | $07 | $0007 | $0007 |
| ins | $00 | $07 | $0007 | $0007 |
| ins | $00 | $07 | $0007 | $0007 |
| cpx #Source\_Array-1 | $00 | $07 | $0007 | $0007 |
| bne Start | $00 | $07 | $0007 | $0007 |
| **Pass 2** | | | | |
| ldab 1,x- | $00 | $7A | $007A | $0007 |
| stab 1,y+ | $00 | $7A | $007A | $0007 |
| clra | $00 | $7A | $007A | $0007 |
| pshd | $00 | $7A | $007A | $0007 |
| ldd Additions | $00 | $07 | $0007 | $0007 |
| addd 0,sp | $00 | $81 | $0081 | $0007 |
| std Additions | $00 | $81 | $0081 | $0081 |
| ins | $00 | $81 | $0081 | $0081 |
| ins | $00 | $81 | $0081 | $0081 |
| cpx #Source\_Array-1 | $00 | $81 | $0081 | $0081 |
| bne Start | $00 | $81 | $0081 | $0081 |
| **Pass 3** | | | | |
| ldab 1,x- | $00 | $2C | $002C | $0081 |
| stab 1,y+ | $00 | $2C | $002C | $0081 |
| clra | $00 | $2C | $002C | $0081 |
| pshd | $00 | $2C | $002C | $0081 |
| ldd Additions | $00 | $81 | $0081 | $0081 |
| addd 0,sp | $00 | $AD | $00AD | $0081 |
| std Additions | $00 | $AD | $00AD | $00AD |
| ins | $00 | $AD | $00AD | $00AD |
| ins | $00 | $AD | $00AD | $00AD |
| cpx #Source\_Array-1 | $00 | $AD | $00AD | $00AD |
| bne Start | $00 | $AD | $00AD | $00AD |
| **Pass 4** | | | | |
| ldab 1,x- | $00 | $55 | $0055 | $00AD |
| stab 1,y+ | $00 | $55 | $0055 | $00AD |
| clra | $00 | $55 | $0055 | $00AD |
| pshd | $00 | $55 | $0055 | $00AD |
| ldd Additions | $00 | $AD | $00AD | $00AD |
| addd 0,sp | $01 | $02 | $0102 | $00AD |
| std Additions | $01 | $02 | $0102 | $0102 |
| ins | $01 | $02 | $0102 | $0102 |
| ins | $01 | $02 | $0102 | $0102 |
| cpx #Source\_Array-1 | $01 | $02 | $0102 | $0102 |
| bne Start | $01 | $02 | $0102 | $0102 |
| Pass 5 | | | | |
| ldab 1,x- | $01 | $06 | $0106 | $0102 |
| stab 1,y+ | $01 | $06 | $0106 | $0102 |
| clra | $00 | $06 | $0006 | $0102 |
| pshd | $00 | $06 | $0006 | $0102 |
| ldd Additions | $01 | $02 | $0102 | $0102 |
| addd 0,sp | $01 | $08 | $0108 | $0102 |
| std Additions | $01 | $08 | $0108 | $0108 |
| ins | $01 | $08 | $0108 | $0108 |
| ins | $01 | $08 | $0108 | $0108 |
| cpx #Source\_Array-1 | $01 | $08 | $0108 | $0108 |
| bne Start | $01 | $08 | $0108 | $0108 |

Task 2 Memory Map

## Pre Execution:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source\_Array | | | | | | | | | Destination\_Array | | | | | | | | |
| $1000 | $1001 | $1002 | $1003 | $1004 | $1005 | $1006 | $1007 | $1008 | $1009 | $100a | $100b | $100c | $100d | $100e | $100f | $1010 | $1011 |
| $FF | $FE | $03 | $04 | $80 | $01 | $FE | $02 | $00 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## Post Execution:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source\_Array | | | | | | | | | Destination\_Array | | | | | | | | |
| $1000 | $1001 | $1002 | $1003 | $1004 | $1005 | $1006 | $1007 | $1008 | $1009 | $100a | $100b | $100c | $100d | $100e | $100f | $1010 | $1011 |
| $FF | $FE | $03 | $04 | $80 | $01 | $FE | $02 | $00 | $00 | $01 | $02 | $03 | $04 | $80 | $FE | $FE | $FF |