Nhan Le
CS370
Output file

I am using lab7_sub.decaf provide from the instruction. You can use make to run it

```
nle@allman:~/CS/CS370/LAB7> make run
./lab7 < lab7_sub.decaf

      LABEL           Offset  SIZE    LEVEL   type    subtype
      _T5             17      1       2       INT     Scalar
      _T4             16      1       2       INT     Scalar
      _T3             15      1       2       INT     Scalar
      _T2             14      1       2       INT     Scalar
      _T1             13      1       2       INT     Scalar
      _T0             12      1       2       INT     Scalar
      x               2       10      2       INT     Array
      y               1       1       1       INT     Scalar
      f               0       0       0       INT     Method
      b               0       1       1       INT     Scalar
      z               201     1       0       INT     Scalar
      Y               101     100     0       BOOL    Array
      Z               1       100     0       INT     Array
      y               0       1       0       INT     Scalar
      print_string            0       0       0       VOID    Extern Method
      print_int               0       0       0       VOID    Extern Method


      LABEL           Offset  SIZE    LEVEL   type    subtype
      _T11            17      1       2       INT     Scalar
      _T10            16      1       2       INT     Scalar
      _T9             15      1       2       INT     Scalar
      _T8             14      1       2       INT     Scalar
      _T7             13      1       2       INT     Scalar
      _T6             12      1       2       INT     Scalar
      x               2       10      2       INT     Array
      y               1       1       1       INT     Scalar
      f               0       0       0       INT     Method
      b               0       1       1       INT     Scalar
      z               201     1       0       INT     Scalar
      Y               101     100     0       BOOL    Array
      Z               1       100     0       INT     Array
      y               0       1       0       INT     Scalar
      print_string            0       0       0       VOID    Extern Method
      print_int               0       0       0       VOID    Extern Method


      LABEL           Offset  SIZE    LEVEL   type    subtype
      y               1       1       1       INT     Scalar
      f               0       0       0       INT     Method
      b               0       1       1       INT     Scalar
      z               201     1       0       INT     Scalar
      Y               101     100     0       BOOL    Array
      Z               1       100     0       INT     Array
      y               0       1       0       INT     Scalar
      print_string            0       0       0       VOID    Extern Method
      print_int               0       0       0       VOID    Extern Method


      LABEL           Offset  SIZE    LEVEL   type    subtype
      _T21            11      1       1       INT     Scalar
      _T20            10      1       1       INT     Scalar
      _T19            9       1       1       INT     Scalar
      _T18            8       1       1       INT     Scalar
      _T17            7       1       1       INT     Scalar
      _T16            6       1       1       INT     Scalar
      _T15            5       1       1       INT     Scalar
      _T14            4       1       1       INT     Scalar
      _T13            3       1       1       INT     Scalar
      _T12            2       1       1       INT     Scalar
      main            0       0       0       INT     Method
      arg1            1       1       1       INT     Scalar
      arg2            0       1       1       INT     Scalar
      f               0       18      0       INT     Method
      z               201     1       0       INT     Scalar
      Y               101     100     0       BOOL    Array
      Z               1       100     0       INT     Array
      y               0       1       0       INT     Scalar
      print_string            0       0       0       VOID    Extern Method
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      LABEL           Offset  SIZE    LEVEL   type    subtype
      main            0       12      0       INT     Method
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      z               201     1       0       INT     Scalar
      Y               101     100     0       BOOL    Array
      Z               1       100     0       INT     Array
      y               0       1       0       INT     Scalar
      print_string            0       0       0       VOID    Extern Method
      print_int               0       0       0       VOID    Extern Method
```

```
Parsing complted
 EXTERN FUNC print_int
  EXTERN Type  INT
END EXTERN with Type:  VOID

 EXTERN FUNC print_string
  EXTERN Type  STRING
END EXTERN with Type:  VOID

 Package : foo
     Variable  y with type  INT  = 7
  Variable  Z[100]  with type  INT
  Variable  Y[100]  with type  BOOL
  Variable  z with type  INT  = 10
  METHOD FUNCTION  'f' with type  INT
    (
    Method Variable b INT
    )
    BLOCK STATEMENT
     Variable  y with type  INT
     BLOCK STATEMENT
      Variable  x[10]  with type  INT
      ASSIGNMENT STATEMENT
       Variable x
         [
         EXPR  -
          EXPR  +
           CONSTANT INTEGER  2
           CONSTANT INTEGER  3
          CONSTANT INTEGER  5
         ]
       EXPR  +
        Variable b
         METHOD CALL name: f
          (
METHOD ARG
          unknown type in ASTprint
          )
     BLOCK STATEMENT
      Variable  x[10]  with type  INT
      ASSIGNMENT STATEMENT
       Variable x
         [
         EXPR  -
          EXPR  +
           CONSTANT INTEGER  2
           CONSTANT INTEGER  3
          CONSTANT INTEGER  5
         ]
       EXPR  +
        Variable b
         METHOD CALL name: f
          (
METHOD ARG
          unknown type in ASTprint
          )
  METHOD FUNCTION  'main' with type  INT
    (
    Method Variable arg1 INT
    Method Variable arg2 INT
    )
    BLOCK STATEMENT
      METHOD CALL name: print_int
       (
METHOD ARG
       unknown type in ASTprint
       )
      METHOD CALL name: print_int
       (
METHOD ARG
       unknown type in ASTprint
       )
      METHOD CALL name: print_string
       (
METHOD ARG
       CONSTANT STRING  "hello world\n"
       )

Finished printing AST
nle@allman:~/CS/CS370/LAB7>
```

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./lab7 < lab7_sub.decaf
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EXTERN FUNC print_int

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        EXPR  +
         CONSTANT INTEGER  2
         CONSTANT INTEGER  3
        CONSTANT INTEGER  5
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        (
METHOD ARG
        unknown type in ASTprint
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     Variable  x[10]  with type  INT
     ASSIGNMENT STATEMENT
      Variable x
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       EXPR  -
        EXPR  +
         CONSTANT INTEGER  2
```

```
        CONSTANT INTEGER  3
       CONSTANT INTEGER  5
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