

1. Create a subprogram by concatenating the subprogram prolog, subprogram body, and the subprogram epilog.
2. Print the subprogram to the PCode file.

Grammar:

subprogram_declaration \rightarrow *subprogram_head* *variable_declarations* *compound_statement*

Subprogram prolog:

- Create a list of expression trees.
- Make each of the following three a single PCode instruction.
- Insert the PCode instructions into the list.

entry:

```
ent sp  splabel
ent ep  eplabel
```

The labels *entry*, *splabel* and the *eplabel* were created when the subprogram identifier was entered into the symbol table

Steps.

1. Obtain the symbol descriptor for the subprogram identifier, *P*.
 - 1.1. Note that *subprogram_head*, (\$1) is the symbol descriptor for the subprogram identifier, *P*.
2. *string entry=P->ELabel();*
3. *string splabel=P->SPLabel();*
4. *string eplabel=P->EPLabel();*

Subprogram body:

Append the list of statements (expression trees), referenced by *compound_statement* (\$3), to the list created above in the subprogram prolog.

Subprogram epilog:

- Append each of the following PCode instructions to the list created in the subprogram prolog and extended in the subprogram body.

```
rtn t
#define splabel spvalue
#define eplabel epvalue
```