

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 → *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 *slabel*

ent ep *eplabel*

The labels *entry*, *slabel* 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 *slabel*=*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 *slabel* *spvalue*

#define *eplabel* *epvalue*