BCI433 - IBM i Business Computing

Week 11: User Defined Function

Agenda

- RPGLE User defined functions
- Lab 10
- Review

Lesson Objectives

Upon completion of this lecture and lab 10 you'll be able to:

- Create and Use user defined functions in a RPGLE program

The Simple Example

The simple example includes the following source code members:

- DAYDSP.dspf
  - It's display file for the app
- DAYFUNCTS.rpgle
  - The implementation of the function(s) based on the prototype(s)
- DAYPROTO.rpgle
  - Define one or more prototypes of functions
  - Similar to Java Interface: no implement for the functions
- DAYSRPG.rpgle
  - The RPGLE program that uses/calls the function(s)

Defining PROTOTYPE for a Function

- Concept
  - Abstract methods in Java
- Example
  - DAYPROTO.rpgle
  - Code:

```
Dcl-Pr DayNumName Char(9);
 DayIn Packed(1);
End-Pr;
```

  - Function params: DayIn, Packed(1) type
  - Function return type: Char(9)

Note: don't compile the prototype DAYPROTO.rpgle

Embedding PROTOTYPE in RPGLE

- Concept
  - The process before compiling the RPGLE program
- Example
  - DAYSRPG.rpgle, DAYFUNCTS.rpgle
  - Code:

```
// COPY THE PROTOTYPE HERE
/COPY LAB10,DAYPROTO
```

- Note:
  1. The slash ('/') in '/COPY' must be at column 7.
  2. 'LAB10' is the LAB10.*file.pf-src which holds DAYSRPG.rpgle.
  3. No space(s) before or after the coma '.'.
  4. No ';' at the end of the COPY 'statement'.

Defining Your Function in RPGLE

- DAYFUNCTS.rpgle

```
// COPY THE PROTOTYPE HERE
/COPY LAB10,DAYPROTO
```

```
Dcl-Proc DayNumName  EXPORT;
  Dcl-Pi *N CHAR(9) ;
    Number  Packed(1);
  End-PI;

  DCL-S DayName Char(9);

    SELECT;
       WHEN NUMBER = 1;
          DAYNAME = 'Monday';
       //... ...
       OTHER;
          DAYNAME = 'Unknown';
    ENDSL;

         Return Dayname;
End-Proc;
```

Invoking Function in RPGLE

- DAYSRPG.rpgle

```
// COPY THE PROTOTYPE HERE
/COPY LAB10,DAYPROTO
```

```
DayName = DayNumName(DayIn);
```

DAYFUNCTS2.rpgle

This code uses alternative and improved approach to implement the same function:

- The function code will be discussed in class
- Note: the code of the CLLE driver program will be also be discussed in class

Homework

- Review lecture notes.
- Complete Lab 10
- Due: Lab 8, Lab 9B

Lab 10 Demo

The End