

# Exercise 3: Find Function to be re-generated

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## *Goal*

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When you change an Internal Function in CA 2E or CA Plex RPG, you need to regen and compile External Functions that calls the Internal Function directory or in-directory.

We want to get list of Function to be regen and rebuild by changing an Internal Function

Could you define an approach of finding the answer for above?

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## *Pre-definition*

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### Node: Function

Boolean Property IsInternal indicate if the function is Internal or External

- True: Internal Function
- False: External function

The Internal Function's name is numeric as well

### Edge: Function\_Calls\_Function

Functions are connected with Function\_Calls\_Function Edge



For Programming solution, you may have data as bellow

```
{ name: '1102619', IsInternal = true, caller: ['1100202', '1100191', '1100152', '1100174']}  
{ name: '1100202', IsInternal = true, caller: ['INASEFR', 'INC3E1R']}  
{ name: 'INASEFR', IsInternal = false, caller: null}  
{ name: 'INC3E1R', IsInternal = false, caller: ['INC4DFR']}  
{ name: '1100191', IsInternal = true, caller: ['INCRE1R', '1102469']}  
{ name: 'INCRE1R', IsInternal = false, caller: null}  
{ name: '1102469', IsInternal = true, caller: ['INA7XFR']}  
{ name: 'INA7XFR', IsInternal = false, caller: ['INA5DFR']}  
{ name: '1100152', IsInternal = true, caller: ['1102469']}  
...
```

Intermediate storage

```
HashMap<string> visited  
HashMap<string> result
```