

# Original Program

```

...
Loop:
  INS A
  INS B
  INS C
  goto Loop
...
  
```

## Process 1

```

...
Loop:
  INS A
  INS B
  INS C
  goto Loop
...
  
```

## Process 2

```

...
Loop:
  INS A
  INS B
  INS C
  goto Loop
...
  
```

(a)

## Process 1

```

INS  $\bar{A}_1$ 
INS  $\bar{B}_1$ 
INS  $\bar{A}_2$ 
INS  $\bar{B}_2$ 
INS  $\bar{A}_3$ 
INS  $\bar{B}_3$ 
INS  $\bar{A}_4$ 
INS  $\bar{B}_4$ 
  
```

## Process 2

```

INS  $\underline{A}_1$ 
INS  $\underline{B}_1$ 
INS C1
INS  $\underline{A}_2$ 
INS  $\underline{B}_2$ 
INS C2
INS  $\underline{A}_3$ 
INS  $\underline{B}_3$ 
INS C3
INS  $\underline{A}_4$ 
INS  $\underline{B}_4$ 
INS C4
  
```

—▶ DepD: Data dependence

- - - -> DepS: Dependency due to intra-process scheduling

.....▶ DepF: Dependency due to FIFO size limit

(b)

## Process 1

```

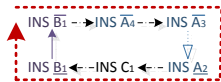
INS  $\bar{A}_1$ 
INS  $\bar{A}_2$ 
INS  $\bar{A}_3$ 
INS  $\bar{A}_4$ 
INS  $\bar{B}_1$ 
INS  $\bar{B}_2$ 
INS  $\bar{B}_3$ 
INS  $\bar{B}_4$ 
  
```

## Process 2

```

INS  $\underline{A}_1$ 
INS  $\underline{B}_1$ 
INS C1
INS  $\underline{A}_2$ 
INS  $\underline{B}_2$ 
INS C2
INS  $\underline{A}_3$ 
INS  $\underline{B}_3$ 
INS C3
INS  $\underline{A}_4$ 
INS  $\underline{B}_4$ 
INS C4
  
```

## Cycle of dependence



(c)