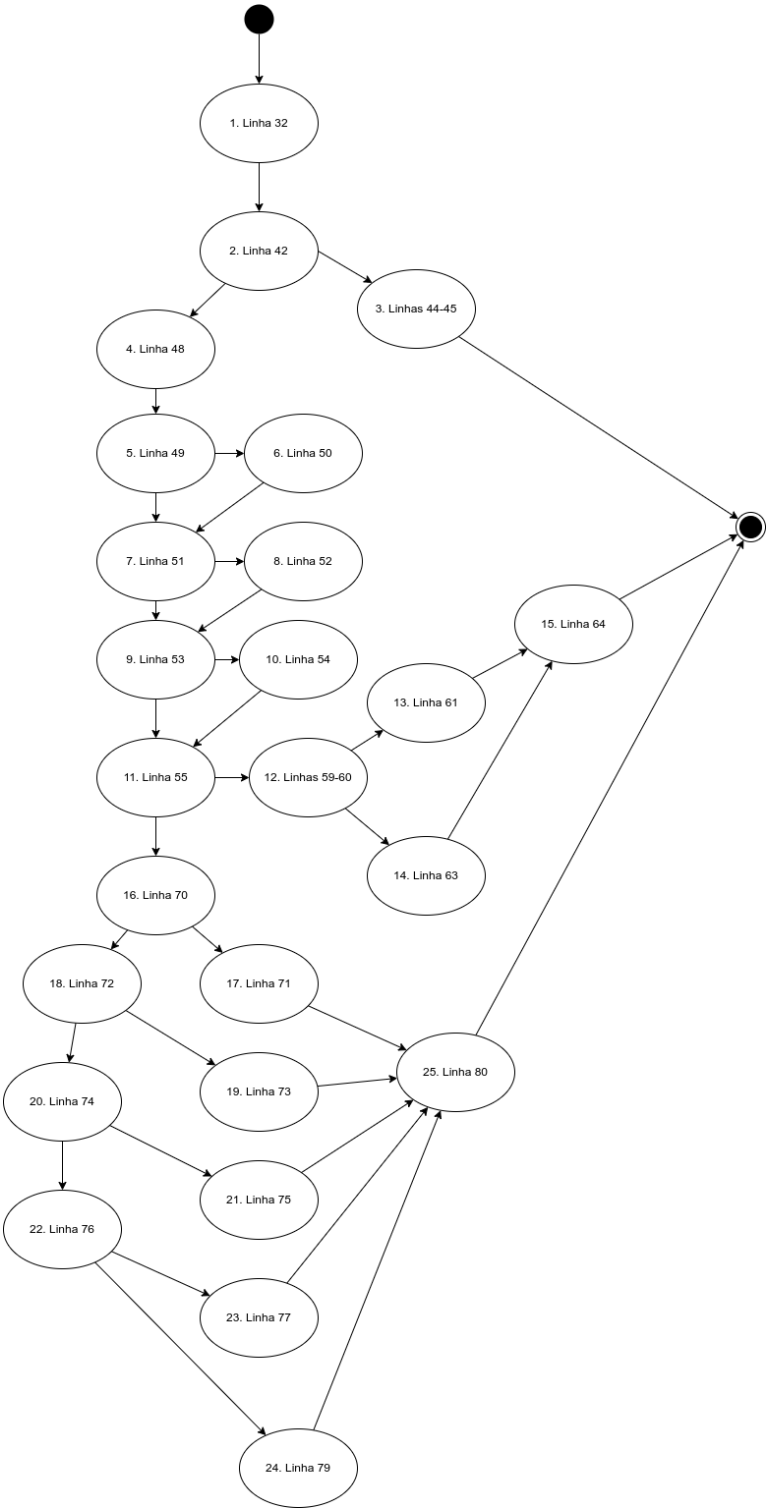
Alunos: Eduardo Boccato Pires de Camargo - 194286
Giovanne Lucas Dias Pereira Mariano - 173317
Natan Beltrão da Cunha Pevidor Carvalho - 184972

Para o programa dado na Aula 11:

1. Identifique os requisitos de testes de caminhos básicos.



Calculando a complexidade ciclomática do grafo acima, obtemos o valor 11 (10 nós predicados + 1). Portanto, há 11 caminhos básicos no grafo. São eles:

- 1 - 2 - 3
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 16 - 18 - 20 - 22 - 24 - 25
- 1 - 2 - 4 - 5 - 6 - 7 - 9 - 11 - 16 - 18 - 20 - 22 - 24 - 25
- 1 - 2 - 4 - 5 - 7 - 8 - 9 - 11 - 16 - 18 - 20 - 22 - 24 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 10 - 11 - 16 - 18 - 20 - 22 - 24 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 12 - 13 - 15
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 16 - 17 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 16 - 18 - 19 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 16 - 18 - 20 - 21 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 16 - 18 - 20 - 22 - 23 - 25
- 1 - 2 - 4 - 5 - 7 - 9 - 11 - 12 - 14 - 15

2. Identifique os requisitos de teste de caminhos principais usando a GraphCoverage.

57 test paths are needed for Prime Path Coverage using the prefix graph algorithm

Test Paths	Test Requirements that are toured by test paths directly
[1,2,3]	[1,2,3]
[1,2,4,5,7,9,11,12,13,15]	[1,2,4,5,7,9,11,12,13,15]
[1,2,4,5,7,9,11,12,14,15]	[1,2,4,5,7,9,11,12,14,15]
[1,2,4,5,7,9,11,16,17,25]	[1,2,4,5,7,9,11,16,17,25]
[1,2,4,5,7,9,11,16,18,19,25]	[1,2,4,5,7,9,11,16,18,19,25]
[1,2,4,5,6,7,9,11,12,13,15]	[1,2,4,5,6,7,9,11,12,13,15]
[1,2,4,5,6,7,9,11,16,17,25]	[1,2,4,5,6,7,9,11,16,17,25]
[1,2,4,5,6,7,9,11,12,14,15]	[1,2,4,5,6,7,9,11,12,14,15]
[1,2,4,5,7,9,10,11,12,13,15]	[1,2,4,5,7,9,10,11,12,13,15]
[1,2,4,5,7,9,10,11,12,14,15]	[1,2,4,5,7,9,10,11,12,14,15]
[1,2,4,5,7,9,10,11,16,17,25]	[1,2,4,5,7,9,10,11,16,17,25]
[1,2,4,5,7,8,9,11,16,17,25]	[1,2,4,5,7,8,9,11,16,17,25]
[1,2,4,5,7,8,9,11,12,14,15]	[1,2,4,5,7,8,9,11,12,14,15]
[1,2,4,5,7,8,9,11,12,13,15]	[1,2,4,5,7,8,9,11,12,13,15]
[1,2,4,5,7,9,11,16,18,20,21,25]	[1,2,4,5,7,9,11,16,18,20,21,25]
[1,2,4,5,7,9,10,11,16,18,19,25]	[1,2,4,5,7,9,10,11,16,18,19,25]
[1,2,4,5,7,8,9,11,16,18,19,25]	[1,2,4,5,7,8,9,11,16,18,19,25]
[1,2,4,5,6,7,8,9,11,16,17,25]	[1,2,4,5,6,7,8,9,11,16,17,25]
[1,2,4,5,6,7,8,9,11,12,14,15]	[1,2,4,5,6,7,8,9,11,12,14,15]
[1,2,4,5,6,7,9,10,11,12,13,15]	[1,2,4,5,6,7,9,10,11,12,13,15]
[1,2,4,5,6,7,8,9,11,12,13,15]	[1,2,4,5,6,7,8,9,11,12,13,15]
[1,2,4,5,6,7,9,10,11,12,14,15]	[1,2,4,5,6,7,9,10,11,12,14,15]
[1,2,4,5,7,8,9,10,11,12,13,15]	[1,2,4,5,7,8,9,10,11,12,13,15]

[1,2,4,5,7,8,9,10,11,12,14,15]	[1,2,4,5,7,8,9,10,11,12,14,15]
[1,2,4,5,7,8,9,10,11,16,17,25]	[1,2,4,5,7,8,9,10,11,16,17,25]
[1,2,4,5,6,7,9,10,11,16,17,25]	[1,2,4,5,6,7,9,10,11,16,17,25]
[1,2,4,5,6,7,9,11,16,18,19,25]	[1,2,4,5,6,7,9,11,16,18,19,25]
[1,2,4,5,7,8,9,11,16,18,20,21,25]	[1,2,4,5,7,8,9,11,16,18,20,21,25]
[1,2,4,5,7,8,9,10,11,16,18,19,25]	[1,2,4,5,7,8,9,10,11,16,18,19,25]
[1,2,4,5,7,9,10,11,16,18,20,21,25]	[1,2,4,5,7,9,10,11,16,18,20,21,25]
[1,2,4,5,7,9,11,16,18,20,22,24,25]	[1,2,4,5,7,9,11,16,18,20,22,24,25]
[1,2,4,5,7,9,11,16,18,20,22,23,25]	[1,2,4,5,7,9,11,16,18,20,22,23,25]
[1,2,4,5,6,7,8,9,11,16,18,19,25]	[1,2,4,5,6,7,8,9,11,16,18,19,25]
[1,2,4,5,6,7,8,9,10,11,16,17,25]	[1,2,4,5,6,7,8,9,10,11,16,17,25]
[1,2,4,5,6,7,8,9,10,11,12,13,15]	[1,2,4,5,6,7,8,9,10,11,12,13,15]
[1,2,4,5,6,7,8,9,10,11,12,14,15]	[1,2,4,5,6,7,8,9,10,11,12,14,15]
[1,2,4,5,6,7,9,11,16,18,20,21,25]	[1,2,4,5,6,7,9,11,16,18,20,21,25]
[1,2,4,5,6,7,9,10,11,16,18,19,25]	[1,2,4,5,6,7,9,10,11,16,18,19,25]
[1,2,4,5,6,7,9,11,16,18,20,22,23,25]	[1,2,4,5,6,7,9,11,16,18,20,22,23,25]
[1,2,4,5,6,7,9,11,16,18,20,22,24,25]	[1,2,4,5,6,7,9,11,16,18,20,22,24,25]
[1,2,4,5,7,8,9,10,11,16,18,20,21,25]	[1,2,4,5,7,8,9,10,11,16,18,20,21,25]
[1,2,4,5,6,7,9,10,11,16,18,20,21,25]	[1,2,4,5,6,7,9,10,11,16,18,20,21,25]
[1,2,4,5,6,7,8,9,10,11,16,18,19,25]	[1,2,4,5,6,7,8,9,10,11,16,18,19,25]
[1,2,4,5,6,7,8,9,11,16,18,20,21,25]	[1,2,4,5,6,7,8,9,11,16,18,20,21,25]
[1,2,4,5,7,8,9,11,16,18,20,22,23,25]	[1,2,4,5,7,8,9,11,16,18,20,22,23,25]
[1,2,4,5,7,9,10,11,16,18,20,22,24,25]	[1,2,4,5,7,9,10,11,16,18,20,22,24,25]
[1,2,4,5,7,9,10,11,16,18,20,22,23,25]	[1,2,4,5,7,9,10,11,16,18,20,22,23,25]
[1,2,4,5,7,8,9,11,16,18,20,22,24,25]	[1,2,4,5,7,8,9,11,16,18,20,22,24,25]

[1,2,4,5,6,7,8,9,11,16,18,20,22,23,25]	[1,2,4,5,6,7,8,9,11,16,18,20,22,23,25]
[1,2,4,5,6,7,8,9,11,16,18,20,22,24,25]	[1,2,4,5,6,7,8,9,11,16,18,20,22,24,25]
[1,2,4,5,6,7,8,9,10,11,16,18,20,21,25]	[1,2,4,5,6,7,8,9,10,11,16,18,20,21,25]
[1,2,4,5,6,7,9,10,11,16,18,20,22,23,25]	[1,2,4,5,6,7,9,10,11,16,18,20,22,23,25]
[1,2,4,5,7,8,9,10,11,16,18,20,22,24,25]	[1,2,4,5,7,8,9,10,11,16,18,20,22,24,25]
[1,2,4,5,6,7,9,10,11,16,18,20,22,24,25]	[1,2,4,5,6,7,9,10,11,16,18,20,22,24,25]
[1,2,4,5,7,8,9,10,11,16,18,20,22,23,25]	[1,2,4,5,7,8,9,10,11,16,18,20,22,23,25]
[1,2,4,5,6,7,8,9,10,11,16,18,20,22,23,25]	[1,2,4,5,6,7,8,9,10,11,16,18,20,22,23,25]
[1,2,4,5,6,7,8,9,10,11,16,18,20,22,24,25]	[1,2,4,5,6,7,8,9,10,11,16,18,20,22,24,25]

3. Compare os dois conjuntos produzidos acima em termos do tamanho dos conjuntos e do comprimento dos casos de teste gerados.

   O comprimento dos casos de teste gerados é semelhante entre os dois, pois ambos realizam caminhos de início ao fim dentro do grafo. O tamanho do conjunto de casos de teste, porém, é maior no requisito de caminhos principais.