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Lab 9 Description

Description of solution and pseudocode.

Task A

The main program has a declaration of an array of two dimensions (A[101][101]) and initializes a fixed length of the array.

Task B

A function main

Pass in: an integer array of two-dimension and an integer N with a **for loop** that randomises output. Followed with an **if-else statement** that increases the count of the pair by one.

Pass out: 2000 pairs of indices randomly generated and updated.

Task C

A function main

Pass in: integer values for the height and length of the x and y-axis for the bounding box.

Pass out: the entries of the indices and counts the positive counts of A[][].

Task D

The required response for the bounding box is:

XL = 80, YL = 1, XH = 100, YH = 10

1, 82; 1

1, 89; 1

2, 80; 1

2, 85; 1

2, 86; 1

2, 99; 1

3, 95; 1

4, 86; 1

4, 89; 1

4, 90; 1

4, 92; 1

4, 99; 1

5, 83; 1

5, 84; 1

5, 85; 1

5, 86; 1

5, 91; 1

5, 93; 1

5, 95; 1

6, 84; 1

6, 89; 1

7, 83; 1

7, 84; 1

7, 91; 1

7, 94; 1

7, 97; 1

8, 80; 1

8, 85; 1

8, 90; 1

9, 84; 1

9, 86; 1

9, 89; 1

9, 92; 1

9, 93; 1

9, 97; 1

10, 95; 1

10, 98; 1

10, 99; 1

Bounding Box 2:

XL = 10, YL = 20, XH = 40, YH = 79

20, 10; 1

20, 11; 1

20, 14; 1

20, 35; 1

20, 40; 1

21, 12; 1

21, 16; 1

21, 22; 1

21, 24; 1

21, 38; 1

22, 11; 1

22, 27; 1

22, 29; 1

22, 33; 1

22, 35; 1

22, 38; 1

23, 12; 1

23, 15; 1

23, 20; 1

23, 27; 1

23, 29; 1

23, 31; 1

23, 40; 1

24, 11; 1

24, 22; 1

24, 24; 1

24, 29; 1

24, 34; 1

24, 37; 1

25, 10; 1

25, 11; 1

25, 13; 1
25, 18; 1
25, 19; 1
25, 21; 1
25, 27; 1
25, 28; 1
25, 31; 1
26, 10; 1
26, 12; 1
26, 16; 1
26, 17; 1
26, 23; 1
26, 34; 1
27, 25; 1
27, 33; 1
27, 36; 1
27, 37; 1
28, 11; 1
28, 12; 1
28, 27; 1
28, 29; 1
28, 31; 1
28, 36; 1
29, 11; 1
29, 14; 1
29, 16; 1
29, 23; 1
29, 28; 1
29, 34; 1
29, 40; 1
30, 11; 1

30, 13; 1

30, 20; 1

30, 23; 1

30, 26; 1

30, 33; 1

30, 39; 1

31, 14; 1

31, 15; 1

31, 20; 1

31, 33; 1

32, 23; 1

32, 32; 1

33, 15; 1

33, 29; 1

33, 40; 1

34, 15; 1

34, 20; 1

35, 24; 1

35, 26; 1

35, 30; 1

35, 33; 1

36, 21; 1

36, 30; 1

36, 37; 1

36, 38; 1

37, 10; 1

37, 14; 1

37, 23; 1

37, 25; 1

37, 28; 1

37, 33; 1

37, 34; 1

37, 36; 1

37, 38; 1

38, 11; 1

38, 21; 1

38, 22; 1

38, 23; 1

38, 37; 1

39, 11; 1

39, 23; 1

39, 26; 1

40, 11; 1

40, 13; 1

40, 16; 1

40, 17; 1

40, 28; 1

40, 30; 1

40, 33; 1

40, 34; 1

40, 37; 1

41, 11; 1

41, 12; 1

41, 15; 1

41, 22; 1

41, 24; 1

41, 25; 1

41, 32; 1

42, 10; 1

42, 11; 1

42, 17; 1

42, 37; 1

42, 39; 1

43, 11; 1

43, 13; 1

43, 24; 1

43, 34; 1

43, 37; 1

44, 16; 1

44, 18; 1

44, 39; 1

44, 40; 1

45, 12; 1

45, 18; 1

45, 28; 1

45, 38; 1

46, 26; 1

46, 29; 1

46, 38; 1

47, 11; 1

47, 14; 1

47, 18; 1

47, 21; 1

47, 24; 1

47, 26; 1

47, 32; 1

47, 39; 1

47, 40; 1

48, 23; 1

48, 24; 1

49, 14; 1

49, 18; 1

49, 23; 1

49, 25; 1

49, 30; 1

49, 31; 1

49, 37; 1

49, 40; 1

50, 12; 1

50, 15; 1

50, 19; 1

50, 22; 1

50, 33; 1

50, 37; 1

51, 19; 1

51, 23; 1

51, 29; 1

51, 40; 1

52, 11; 1

52, 21; 1

53, 14; 1

53, 20; 1

53, 24; 1

53, 29; 1

53, 32; 1

53, 33; 1

53, 35; 1

54, 10; 1

54, 11; 1

54, 13; 1

54, 29; 1

54, 33; 1

54, 35; 1

55, 13; 1

55, 15; 1

55, 20; 1

55, 23; 1

55, 25; 1

55, 28; 1

55, 34; 1

56, 11; 1

56, 16; 1

56, 17; 1

56, 24; 1

56, 26; 1

56, 31; 1

56, 40; 1

57, 24; 1

57, 30; 1

58, 18; 1

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58, 33; 1

58, 39; 1

59, 14; 1

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59, 32; 1

59, 34; 1

60, 15; 1

60, 26; 1

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60, 28; 1

60, 34; 1

60, 38; 1

61, 20; 1

61, 24; 1

61, 27; 1

61, 30; 1

61, 31; 1

61, 33; 1

61, 34; 1

61, 36; 1

62, 20; 1

62, 26; 1

62, 29; 1

62, 33; 1

62, 34; 1

62, 35; 1

63, 15; 1

63, 22; 1

63, 29; 1

63, 34; 1

64, 10; 1

64, 38; 1

65, 16; 1

65, 31; 1

65, 33; 1

65, 36; 1

65, 40; 1

66, 12; 1

66, 30; 1

66, 33; 1

66, 35; 1

67, 27; 1

67, 28; 1

67, 36; 1

68, 10; 1

68, 18; 1

68, 21; 1

68, 22; 1

68, 25; 1

68, 26; 1

68, 40; 1

69, 12; 1

69, 16; 1

69, 18; 1

69, 24; 1

69, 27; 1

69, 31; 1

69, 34; 1

69, 36; 1

70, 15; 1

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70, 28; 1

70, 29; 1

70, 31; 1

70, 36; 1

70, 38; 1

71, 13; 1

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71, 36; 1

71, 38; 1

72, 16; 1

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72, 22; 1

72, 28; 1

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72, 30; 1

72, 32; 1

72, 36; 1

72, 39; 1

73, 12; 1

73, 27; 1

73, 29; 1

74, 19; 1

74, 20; 1

74, 22; 1

74, 31; 1

74, 33; 1

74, 34; 1

75, 12; 1

75, 13; 1

75, 15; 1

75, 20; 1

75, 26; 1

75, 28; 1

75, 31; 1

75, 33; 1

75, 36; 1

75, 38; 1

75, 39; 1

76, 14; 1

76, 22; 1

76, 26; 1

76, 27; 1

76, 29; 1

76, 37; 1

77, 14; 1

77, 17; 1

77, 19; 1

77, 25; 1

77, 28; 1

77, 32; 1

78, 14; 1

78, 20; 1

78, 21; 1

78, 39; 1

78, 40; 1

79, 11; 1

79, 16; 1

79, 17; 1

79, 23; 1

79, 34; 1

Bounding Box 3:

XL = 1, YL = 90, XH = 100, YH = 100

90, 3; 1

90, 4; 1

90, 11; 1

90, 17; 1

90, 23; 1

90, 24; 1

90, 25; 1

90, 29; 1

90, 32; 1

90, 39; 1

90, 42; 1

90, 45; 1

90, 50; 1

90, 57; 1

90, 62; 1

90, 74; 1

90, 75; 1

90, 77; 1

90, 82; 1

90, 84; 1

90, 85; 1

90, 93; 1

90, 98; 1

91, 3; 1

91, 4; 1

91, 6; 1

91, 12; 1

91, 15; 1

91, 23; 1

91, 36; 1

91, 37; 1

91, 38; 1

91, 41; 1

91, 43; 1

91, 47; 1

91, 49; 1

91, 64; 1

91, 66; 1

91, 73; 1

91, 92; 1

92, 5; 1

92, 37; 1

92, 39; 1

92, 42; 1

92, 51; 1

92, 54; 1

92, 59; 1

92, 62; 1

92, 67; 1

92, 82; 1

92, 85; 1

92, 89; 1

92, 91; 1

92, 93; 1

92, 97; 1

93, 5; 1

93, 8; 1

93, 17; 1

93, 21; 1

93, 23; 1

93, 26; 1

93, 30; 1

93, 32; 1

93, 33; 1

93, 34; 1

93, 36; 1

93, 38; 1

93, 41; 1

93, 43; 1

93, 48; 1

93, 53; 1

93, 55; 1

93, 64; 1

93, 68; 1

93, 72; 1

93, 74; 1

93, 77; 1

93, 80; 1

93, 82; 1

93, 84; 1

93, 87; 1

93, 90; 1

93, 92; 1

93, 95; 1

93, 99; 1

94, 5; 1

94, 50; 1

94, 68; 1

94, 82; 1

94, 87; 1

94, 93; 1

94, 99; 1

95, 3; 1

95, 6; 1

95, 11; 1

95, 18; 1

95, 24; 1

95, 25; 1

95, 28; 1

95, 39; 1

95, 41; 1

95, 42; 1

95, 44; 1

95, 52; 1

95, 64; 1

95, 66; 1

95, 73; 1

95, 85; 1

95, 97; 1

96, 10; 1

96, 12; 1

96, 16; 1

96, 21; 1

96, 22; 1

96, 39; 1

96, 52; 1

96, 55; 1

96, 61; 1

96, 67; 1

96, 72; 1

96, 73; 1

96, 74; 1

96, 81; 1

96, 83; 1

96, 97; 1

97, 2; 1

97, 4; 1

97, 6; 1

97, 7; 1

97, 12; 1

97, 16; 1

97, 18; 1

97, 19; 1

97, 22; 1

97, 36; 1

97, 42; 1

97, 76; 1

97, 77; 1

97, 80; 1

97, 89; 1

97, 92; 1

98, 2; 1

98, 3; 1

98, 30; 1

98, 32; 1

98, 35; 1

98, 42; 1

98, 45; 1

98, 46; 1

98, 47; 1

98, 49; 1

98, 60; 1

98, 67; 1

98, 69; 1

98, 70; 1

98, 79; 1

98, 81; 1

98, 86; 1

98, 89; 1

98, 90; 1

99, 1; 1

99, 10; 1

99, 23; 1

99, 25; 1

99, 56; 1

99, 74; 1

99, 75; 1

99, 78; 1

99, 85; 1

99, 90; 1

99, 92; 1

Bounding Box 4:

XL = 40, YL = 30, XH = 70, YH = 60

30, 41; 1

30, 46; 1

30, 48; 1

30, 57; 1

30, 61; 1

31, 44; 1

31, 52; 1

31, 54; 1

31, 62; 1

31, 67; 1

31, 69; 1

32, 44; 1

32, 45; 1

32, 51; 1

32, 56; 1

32, 61; 1

32, 63; 1

32, 65; 1

32, 70; 1

33, 40; 1

33, 41; 1

33, 54; 1

33, 60; 1

33, 65; 1

33, 67; 1

33, 70; 1

34, 41; 1

34, 44; 1

34, 46; 1

34, 48; 1

34, 49; 1

34, 51; 1

34, 58; 1

34, 59; 1

34, 60; 1

34, 61; 1

34, 68; 1

34, 70; 1

35, 50; 1

35, 51; 1

35, 56; 1

35, 57; 1

35, 59; 1

36, 41; 1

36, 47; 1

36, 51; 1

36, 61; 1

36, 67; 1

36, 69; 1

37, 59; 1

37, 61; 1

37, 69; 1

38, 41; 1

38, 42; 1

38, 44; 1

38, 63; 1

38, 67; 1

38, 70; 1

39, 41; 1

39, 44; 1

39, 47; 1

39, 54; 1

39, 56; 1

39, 58; 1

39, 65; 1

39, 66; 1

40, 42; 1

40, 46; 1

40, 51; 1

40, 52; 1

40, 62; 1

40, 70; 1

41, 45; 1

41, 46; 1

41, 47; 1

41, 67; 1

41, 70; 1

42, 57; 1

42, 60; 1

42, 62; 1

43, 42; 1

43, 49; 1

43, 54; 1

43, 58; 1

43, 65; 1

43, 68; 1

44, 40; 1

44, 43; 1

44, 44; 1

44, 46; 1

44, 54; 1

44, 55; 1

44, 58; 1

44, 59; 1

45, 49; 1

45, 56; 1

45, 60; 1

45, 62; 1

45, 67; 1

45, 70; 1

46, 43; 1

46, 45; 1

47, 40; 1

47, 44; 1

47, 58; 1

47, 65; 1

48, 51; 1

48, 56; 1

48, 67; 1

48, 68; 1

48, 69; 1

49, 40; 1

49, 43; 1

49, 50; 1

49, 56; 1

49, 57; 1

49, 65; 1

49, 69; 1

50, 41; 1

50, 49; 1

50, 50; 1

50, 53; 1

50, 55; 1

50, 59; 1

51, 40; 1

51, 41; 1

51, 47; 1

51, 58; 1

51, 65; 1

52, 41; 1

52, 43; 1

52, 46; 1

52, 48; 1

52, 53; 1

52, 58; 1

52, 63; 1

52, 64; 1

52, 65; 1

52, 69; 1

53, 43; 1

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53, 68; 1

54, 45; 1

54, 65; 1

54, 66; 1

54, 69; 1

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55, 60; 1

55, 62; 1

55, 63; 1

55, 65; 1

55, 66; 1

55, 67; 1

56, 40; 1

56, 43; 1

56, 45; 1

56, 52; 1

56, 61; 1

57, 41; 1

57, 50; 1

57, 59; 1

57, 62; 1

57, 66; 1

57, 69; 1

58, 47; 1

58, 57; 1

58, 61; 1

58, 67; 1

59, 41; 1

59, 43; 1

59, 49; 1

59, 51; 1

59, 53; 1

59, 56; 1

59, 63; 1

60, 45; 1

60, 47; 1

60, 52; 1

60, 53; 1

Bounding Box 5:

XL = 50, YL = 50, XH = 70, YH = 70

50, 50; 1

50, 53; 1

50, 55; 1

50, 59; 1

51, 58; 1

51, 65; 1

52, 53; 1

52, 58; 1

52, 63; 1

52, 64; 1

52, 65; 1

52, 69; 1

53, 58; 1

53, 62; 1

53, 68; 1

54, 65; 1

54, 66; 1

54, 69; 1

55, 55; 1

55, 60; 1

55, 62; 1

55, 63; 1

55, 65; 1

55, 66; 1

55, 67; 1

56, 52; 1

56, 61; 1

57, 50; 1

57, 59; 1

57, 62; 1

57, 66; 1

57, 69; 1

58, 57; 1

58, 61; 1

58, 67; 1

59, 51; 1

59, 53; 1

59, 56; 1

59, 63; 1

60, 52; 1

60, 53; 1

61, 54; 1

61, 59; 1

61, 63; 1

61, 64; 1

62, 52; 1

62, 55; 1

62, 57; 1

62, 64; 1

62, 65; 1

62, 67; 1

63, 51; 1

63, 56; 1

63, 68; 1

64, 54; 1
64, 57; 1
64, 60; 1
64, 66; 1
64, 70; 1
65, 63; 1
65, 65; 1
65, 67; 1
66, 51; 1
67, 65; 1
68, 51; 1
68, 55; 1
68, 68; 1
69, 54; 1
69, 61; 1
69, 62; 1
69, 66; 1
69, 70; 1
70, 50; 1
70, 52; 1
70, 62; 1
70, 63; 1
70, 70; 1

How to access GitHub repository.

1. Ask for the username of the person you want to invite as a collaborator. (My name on GitHub is **JacobTwum-K** and link: <https://github.com/JacobTwum-K/LAB-9---Jacob-and-Aurelia.git>).
2. On GitHub, navigate to the main page of the repository.
3. Under your repository name, click Settings.

4. In the left sidebar, click Collaborators.
5. Under "Collaborators", start typing the collaborator's username.
6. Select the collaborator's username from the drop-down menu.
7. Click Add collaborator.
8. The user will receive an email inviting them to the repository. Once they accept your invitation, they will have collaborator access to your repository.