consider that a bank expects to loose from defaults of a student portfolio of 10 students as follows. The bank has used its own internal measures to explain the expected loses. the student number and expected loses are as follows : 1:10,2:20,3:30,4:40,5:50,6:60,7:70,8:80,9:90,10:100. What is the 95% value at risk of this portfolio

To calculate the 95% Value at Risk (VaR) of this portfolio, we first need to sort the expected losses in ascending order and then determine the loss level that corresponds to the 95% quantile. Here are the sorted expected losses for the 10 students:

1: 10 2: 20 3: 30 4: 40 5: 50 6: 60 7: 70 8: 80 9: 90 10: 100

Since there are 10 students, the 95% VaR means we want to find the loss level that has a 5% chance of being exceeded. This would correspond to the 9.5th student in our sorted list (10 students \* 5% = 0.5 students).

To find the 9.5th student's expected loss, we can interpolate between the 9th and 10th students:

9th student's expected loss: 90 10th student's expected loss: 100

Interpolation formula: (1 - weight) \* 9th student's loss + weight \* 10th student's loss

Since we're looking for the 9.5th student, the weight for interpolation is 0.5:

Interpolated expected loss: (1 - 0.5) \* 90 + 0.5 \* 100 = 45 + 50 = 95

Thus, the 95% Value at Risk for this student portfolio is 95. This means that there is a 95% chance that the portfolio's losses will not exceed 95.