**Response for Assignment 6.3**

Below shows the step wise calculation of below problem

In a class on 100 students, 80 students passed in all subjects, 10 failed in one subject, 7 failed in two subjects and 3 failed in three subjects. Find the probability distribution of

the variable for number of subjects a student from the given class has failed in.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Probability of Student not failing in any subject | P(X=0) | 80 students out of 100 | 80/100 | 0.8 |  |
|  |  |  |  |  |  |
| Probability of Student failing in 1 subject | P(X=1) | 10 students out of 100 | 10/100 | 0.1 |  |
|  |  |  |  |  |  |
| Probability of Student failing in 2 subjects | P(X=2) | 7 students out of 100 | 7/100 | 0.07 |  |
|  |  |  |  |  |  |
| Probability of Student failing in 3 subjects | P(X=3) | 3 students out of 100 | 3/100 | 0.03 |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **Probability Distribution of X** | **X** | **0** | **1** | **2** | **3** |
| **P(X)** | **0.08** | **0.1** | **0.07** | **0.03** |

\*\* Excel sheet showing the calculation is also uploaded on Github assignment