a. One example could be a loan approval process by a bank. Consider groups A and B where group A has better financials than group B. Even though the algorithm does fairly good predictions on the accuracy of each subgroups loan repayment probability. It may end up suggesting more loan approvals for group A.

b. One example for this could be an automation tool for job applications. If there are again two groups of applicants as group A and group B, where each has 100 applicants. However group A has 80 highly qualified applicants and group B has only 20. If the tool is forced to select 50 applicants per group, then the amount of positive labels for each sub group will be equally fair. However, some highly qualified applicants from group A will miss a chance.