

ASSESSMENT-6

DATA STORY TELLING

DATA SET: 10STUDENT

GOAL:

1)What factors are correlated with higher grades

PROBLEM STATEMENT:

1)Are there specific patterns related to study hours or high school type that influence grades?

2)Can you identify any trends in the distribution of grades based on age or gender?

3)Are there students with exceptional academic performance despite external factors like additional work commitments?

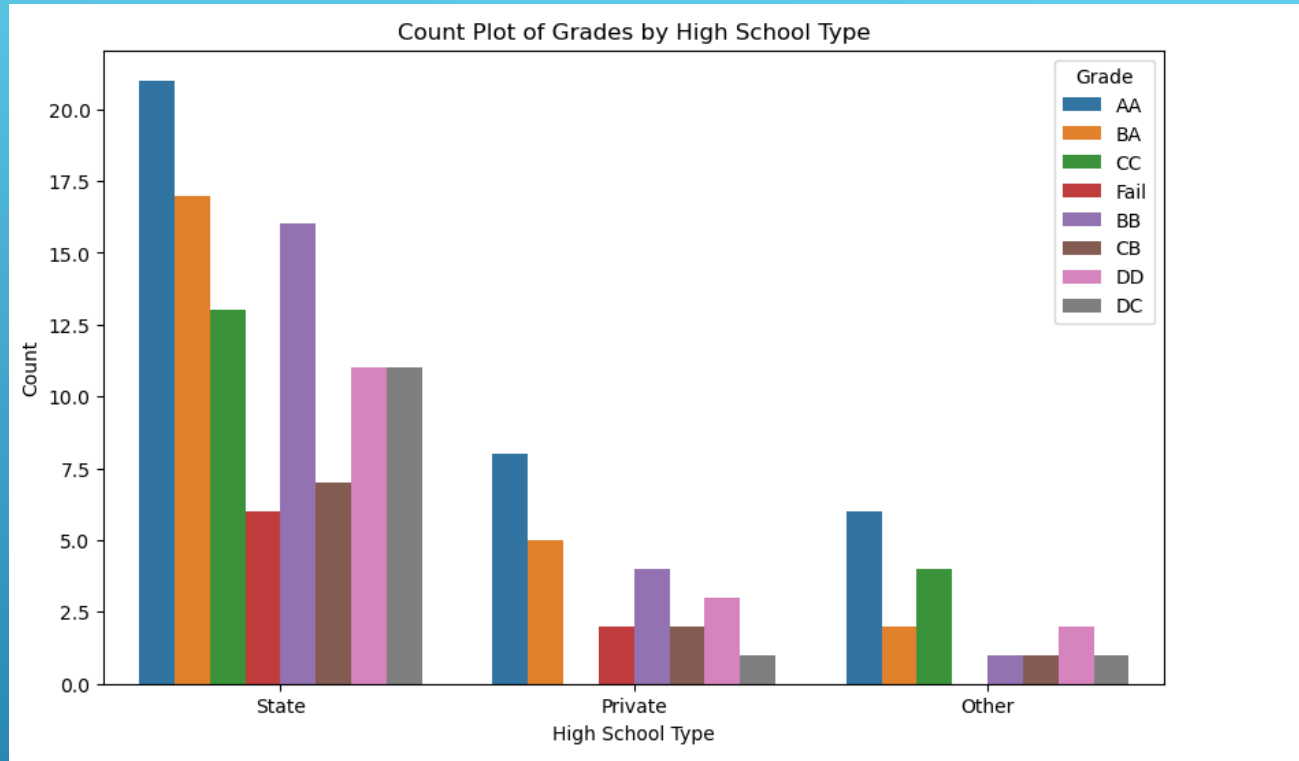
	Id	Student_Age	Gender	High_School_Type	Scholarship	Additional_Work	Weekly_Study_Hours	Project_work	Grade
0	5001.0	21.0	Male	Other	50%	Yes	0.0	No	AA
1	5002.0	20.0	Male	Other	50%	Yes	0.0	Yes	AA
2	5003.0	21.0	Male	State	50%	No	2.0	Yes	AA
3	5004.0	18.0	Female	Private	50%	Yes	2.0	No	AA
4	5005.0	22.0	Male	Private	50%	No	12.0	Yes	AA
...
140	5141.0	22.0	Female	State	50%	Yes	0.0	NaN	CC
141	5142.0	18.0	Female	State	75%	No	0.0	No	CC
142	5143.0	18.0	Female	Private	75%	No	0.0	No	AA
143	5144.0	22.0	Female	State	75%	Yes	12.0	Yes	CB
144	5145.0	18.0	Female	Private	100%	No	12.0	No	BB

145 rows x 9 columns

THE ABOVE PICTURE IS A SAMPLE OF THE DATA SET USED

DATASET DESCRIPTION:

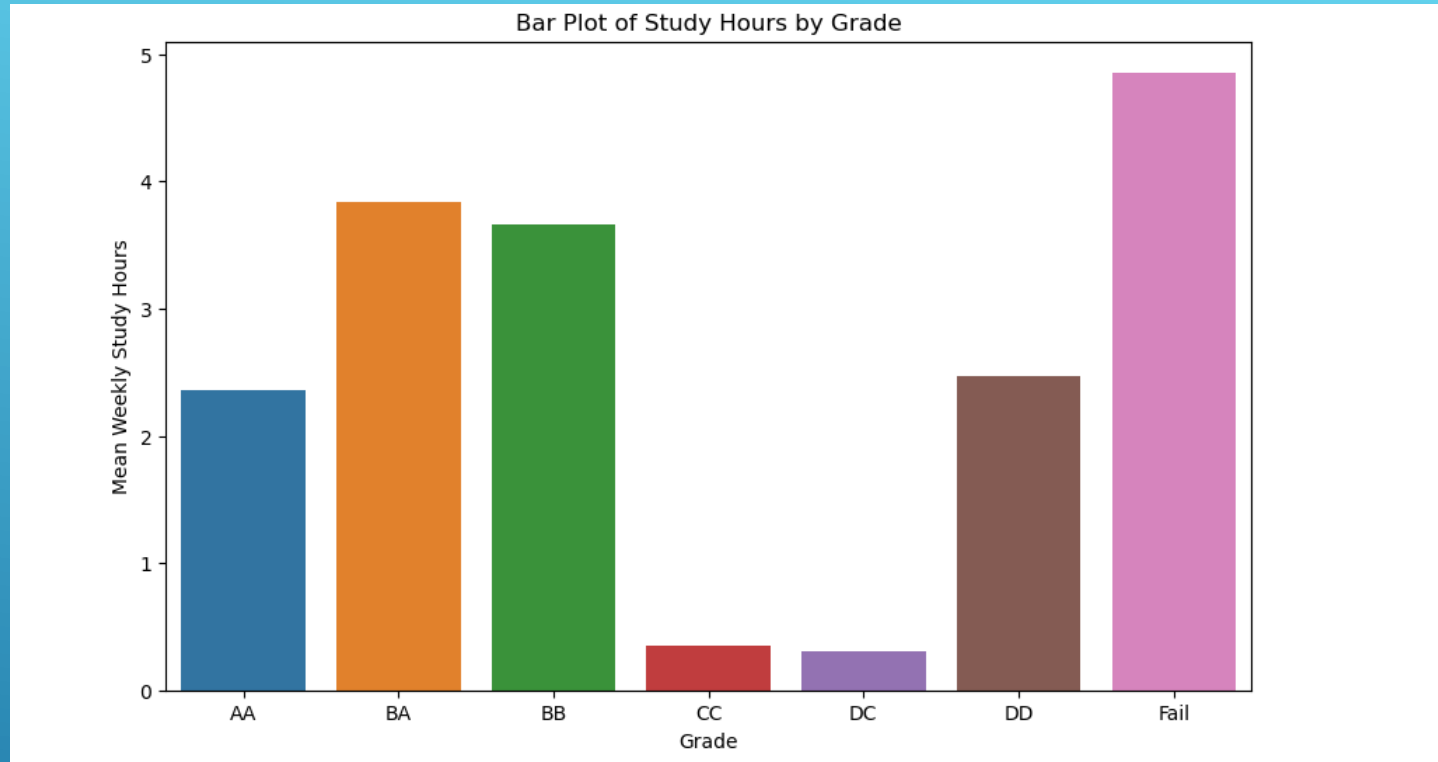
- 1.**Id:** Unique identifier for each student.
- 2.**Student Age:** The age of the student.
- 3.**Gender:** The gender of the student (Male/Female).
- 4.**High School Type:** The type of high school attended by the student (Private/State/Other).
- 5.**Scholarship:** The scholarship status of the student, represented as a percentage.
- 6.**Additional Work:** Indicates whether the student is involved in additional work (Yes/No).
- 7.**Weekly Study Hours:** The number of hours the student studies per week.
- 8.**Project work:** Indicates whether the student is involved in project work (Yes/No).
- 9.**Grade:** The academic grade achieved by the student (e.g., AA, BA, CC, Fail).



THE ABOVE COUNT PLOT IS AN ANALYSIS ON HOW THE HIGH SCHOOL TYPE DEPENDS ON THE GRADES THAT A STUDENT GETS.

INFERENCE:

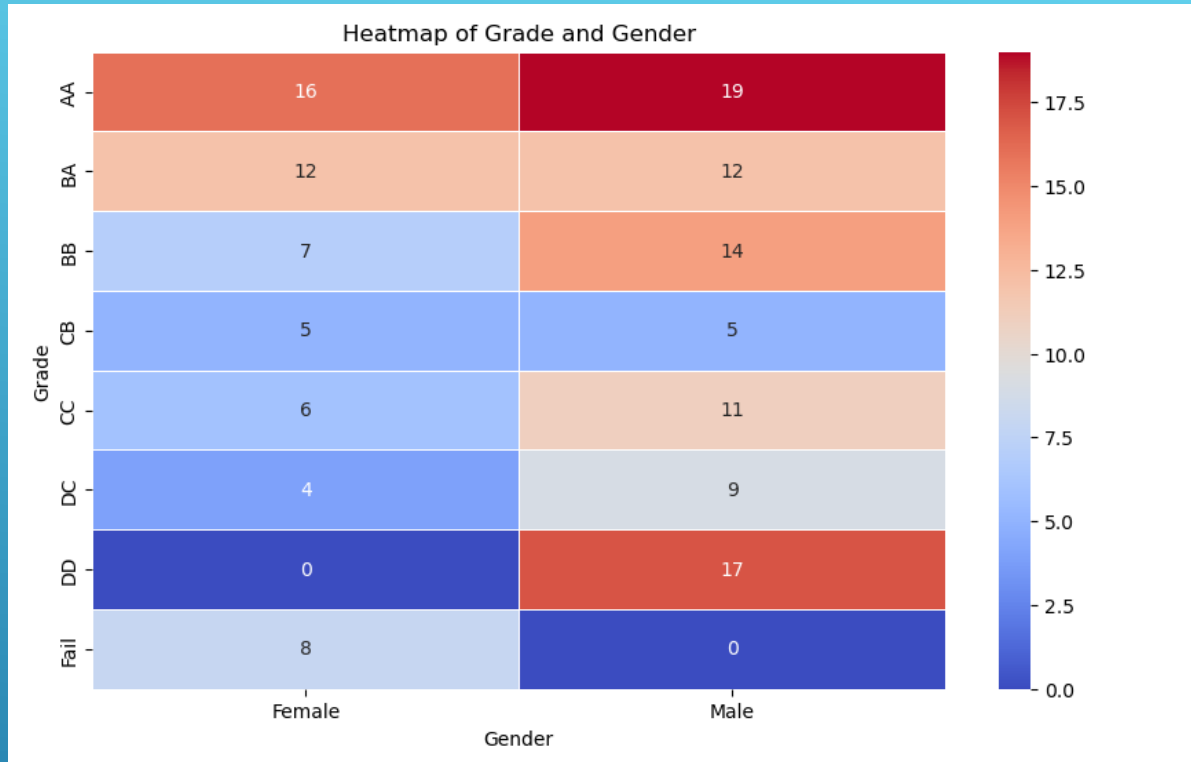
WE CAN INFER FROM THE ABOVE PLOT THAT MOST OF THE STUDENTS WHO HAVE STUDIED IN THE STATE SCHOOL HAVE GOT HIGHER GRADES COMPARED TO PRIVATE AND OTHER TYPE OF SCHOOLS.WE CAN ALSO INFER THAT MOST OF THESE STUDENTS ARE FROM STATE HIGH SCHOOL.



THE ABOVE BAR PLOT IS AN ANALYSIS OF HOW THE NUMBER OF HOURS THAT WE STUDY DETERMINES OUR GRADES

INFERENCE:

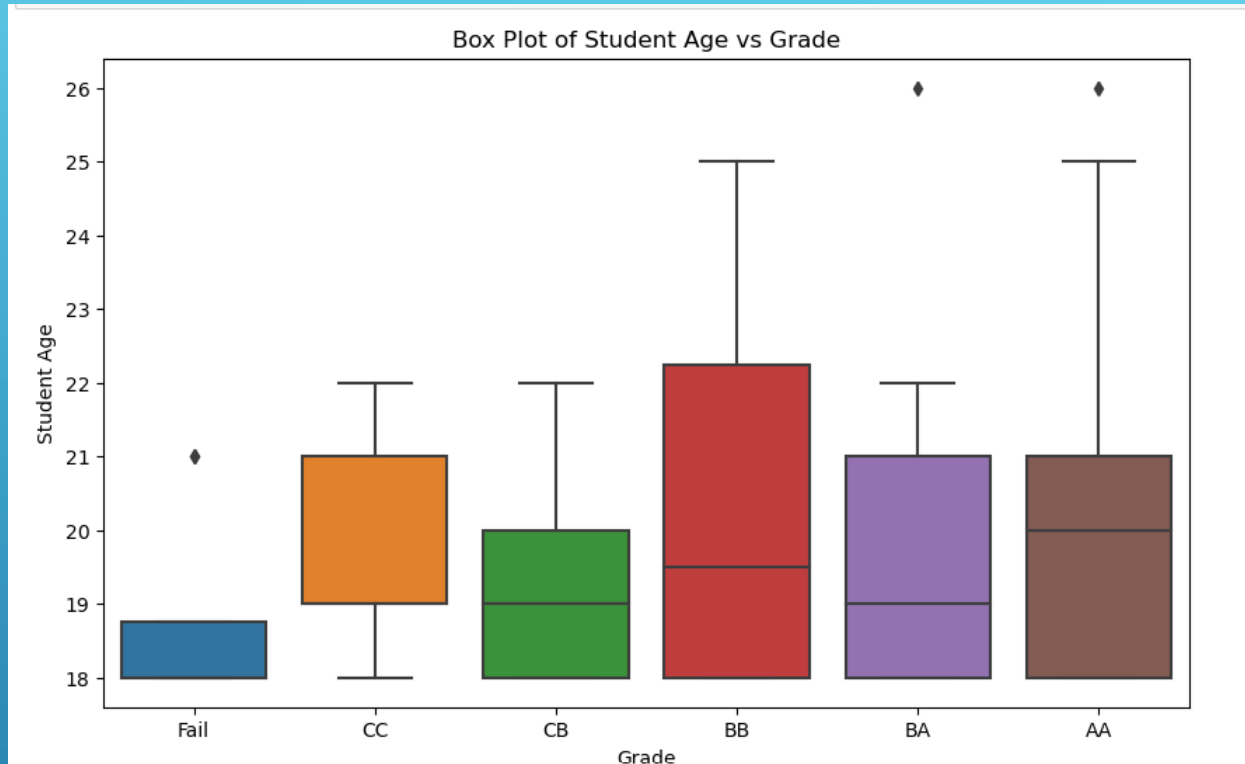
WE CAN INFER FROM THE ABOVE PLOT THAT THE NUMBER OF HOURS WE STUDY HAS NO ACTUAL RELATION WITH THE GRADES WE GET AS WE CAN SEE THAT HIGHER GRADE STUDENTS ARE ACTUALLY SPENDING LESSER NUMBER OF HOURS. THIS SHOWS THAT WE HAVE TO CONCENTRATE ON QUALITY OVER QUANTITY.



THE ABOVE HEAT MAP IS AN ANALYSIS ON WHICH GENDER SCORES THE MAXIMUM GRADES

INFERENCE:

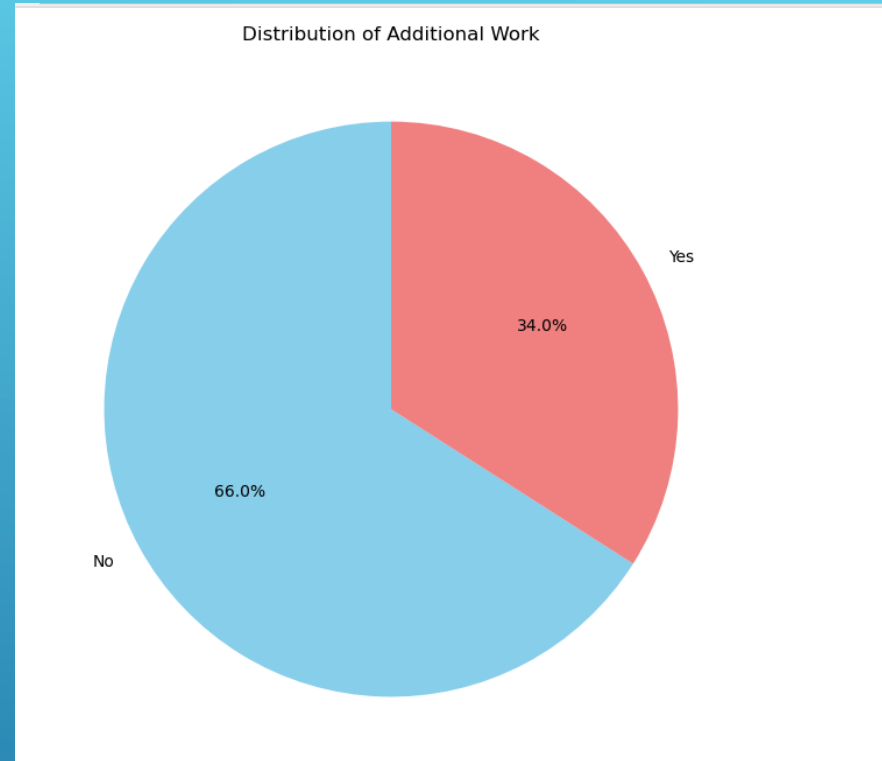
WE CAN INFER FROM THE ABOVE HEAT MAP THAT MOST MEN ARE SCORING WELL WHEN COMPARED TO FEMALES.



THE ABOVE BOX PLOT IS AN ANALYSIS ON HOW THE AGE DETERMINES THE GRADES THAT A STUDENT GETS.

INFERENCE:

WE CAN INFER FROM THE ABOVE PLOT THAT MOST OF THE STUDENTS ARE BETWEEN AGES 18 TO 25. PEOPLE AROUND THE AGE OF 18-19 ARE FAILING WHEREAS RELATIVELY HIGHER AGE BAR PEOPLE ARE DOING BETTER. PEOPLE OF HIGHER AGE ARE DOING BETTER COMPARED TO PEOPLE OF LOWER AGE.



THE ABOVE PIE CHART IS AN ANALYSIS ON HOW MANY STUDENTS TAKE UP ADDITIONAL WORK

INFERENCE:

WE CAN INFER FROM THE ABOVE PIE CHART THAT MOST STUDENTS ARE NOT TAKING UP ADDITIONAL WORK.

RECOMMENDATIONS:

- 1)STUDENTS ARE RECOMMENDED TO ATTEND STATE HIGH SCHOOLS WHICH WILL HELP THEM SCORE BETTER GRADES AS WE OBSERVED IT IN THE TREND.
- 2)FOCUS ON YOUR QUALITY OF STUDY TIME RATHER THAN QUANTITY OF STUDY TIME AS YOUR FOCUS WHILE STUDYING MATTERS EVEN IF IT IS FOR LESS TIME RATHER THAN MORE HOURS AND LESS FOCUS.
- 3)SINCE WE HAVE OBSERVED THAT WOMEN ARE NOT ABLE TO SCORE AS HIGH AS MEN GIVE MORE ATTENTION FOR THEM TO UNDERSTAND BETTER AND GIVE THEM BETTER OPPURTUNITIES.
- 4)SINCE STUDENTS OF LOWER AGES ARE FINDING IT DIFFICULT COMPARED TO STUDENTS OF HIGHER AGES COMPARITIVELY MAKE THE SYLLABUS MORE UNDERSTANDABLE FOR STUDENTS OF ALL AGE GROUPS AND PAY MORE ATTENTION TO THEM
- 5)DO NOT TAKE UP EXTRA ADDITIONAL WORK AND BURDEN YOURSELF RATHER DO HOW MUCH EVER YOU HAVE IN A VERY CORRECT MANNER