



# Student performance data



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# Introduction

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## **Scope:**

This project aims to leverage data analytics to pinpoint the key factors influencing student performance in Schools A and B.

By examining patterns, correlations, trends, and pertinent data, we seek to accurately identify the elements that impact academic performance.



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## **Output:**

This study will deliver timely warnings to students at risk, allowing for targeted interventions to enhance their academic outcomes.



# Aspects

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## 1. Study and Academic Practices

- **A1: Study Time and Performance**
  - The amount of time spent studying directly correlates with student performance

## 2. Home Environment and Support

- **A2: Home Support System**
  - Students who have a strong support at home perform better academically
- **A3: Parental Support**
  - The level of parental involvement in a student's education affects their academic success

## 3. Extra-curricular and External Activities

- **A4: Extra-curricular Activities**
  - Students who participate in extra-curricular activities have higher academic achievement

# Aspects

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## 4. Technology, Socioeconomic and Resource Factors

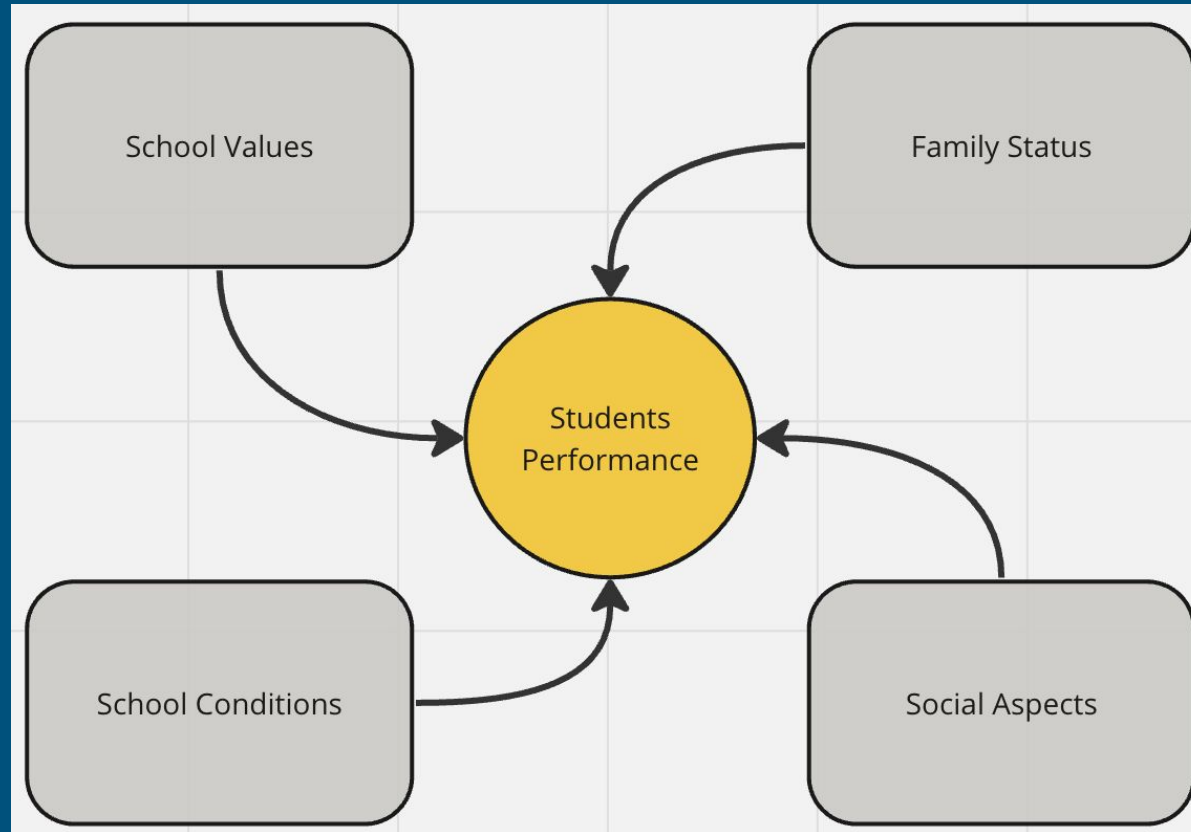
- **A5: Socioeconomic Status**
  - The socioeconomic status of students affects their academic performance
- **A6: Technology Use, Access to Resources**
  - Students who have access to educational resources and technology perform better
  - The use of technology and online learning platforms improves student performance

## 5. Social Influences

- **A7: Negative Influences**
  - Students who consume alcohol have more absences
  - Longer travel time exhibit a negative correlation with grades

# Impacts

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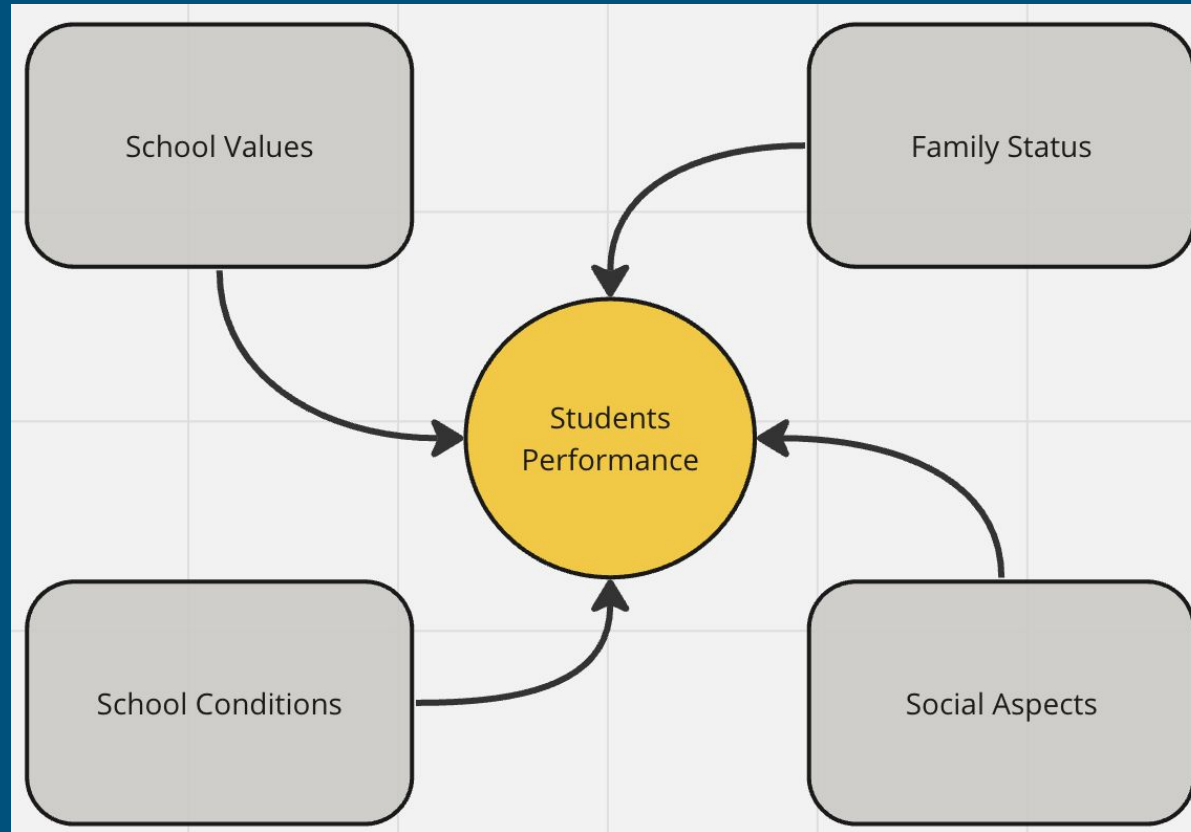


# Impacts

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## School Values:

- # of past class failures
- # school absences

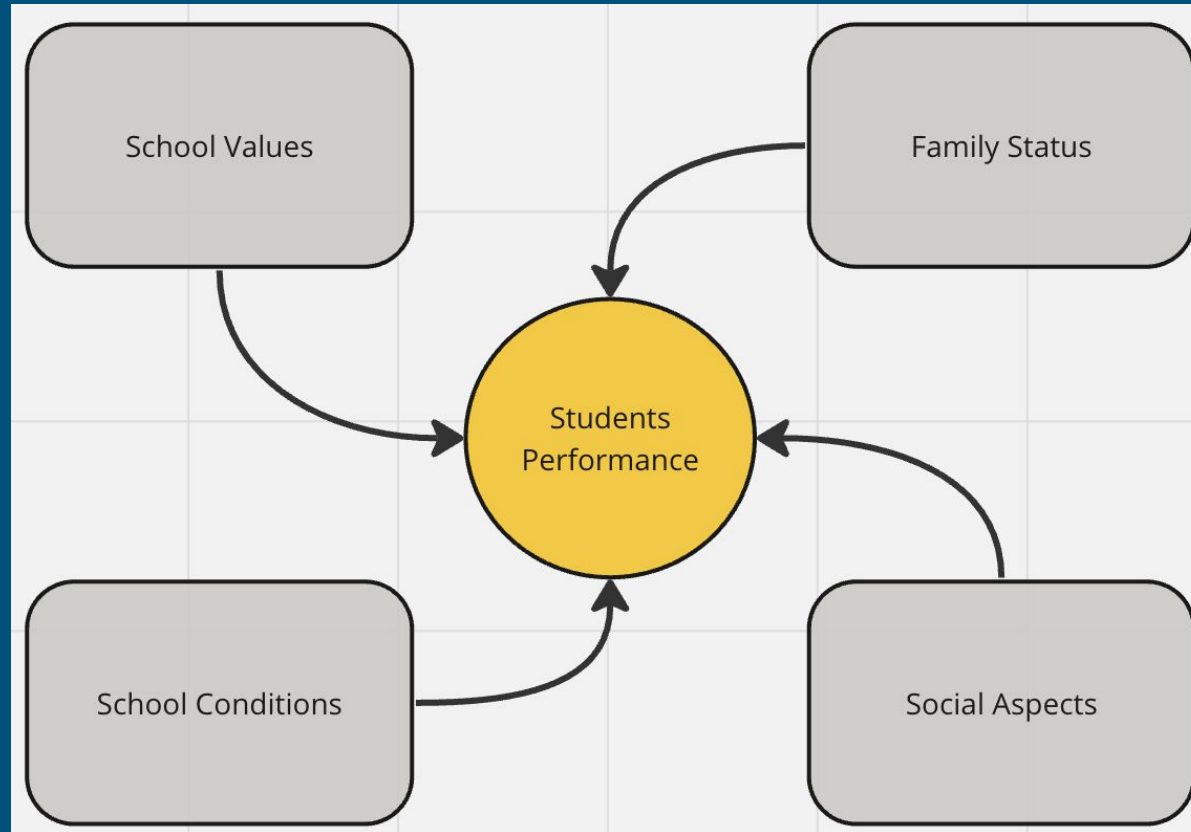


# Impacts

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## School Conditions:

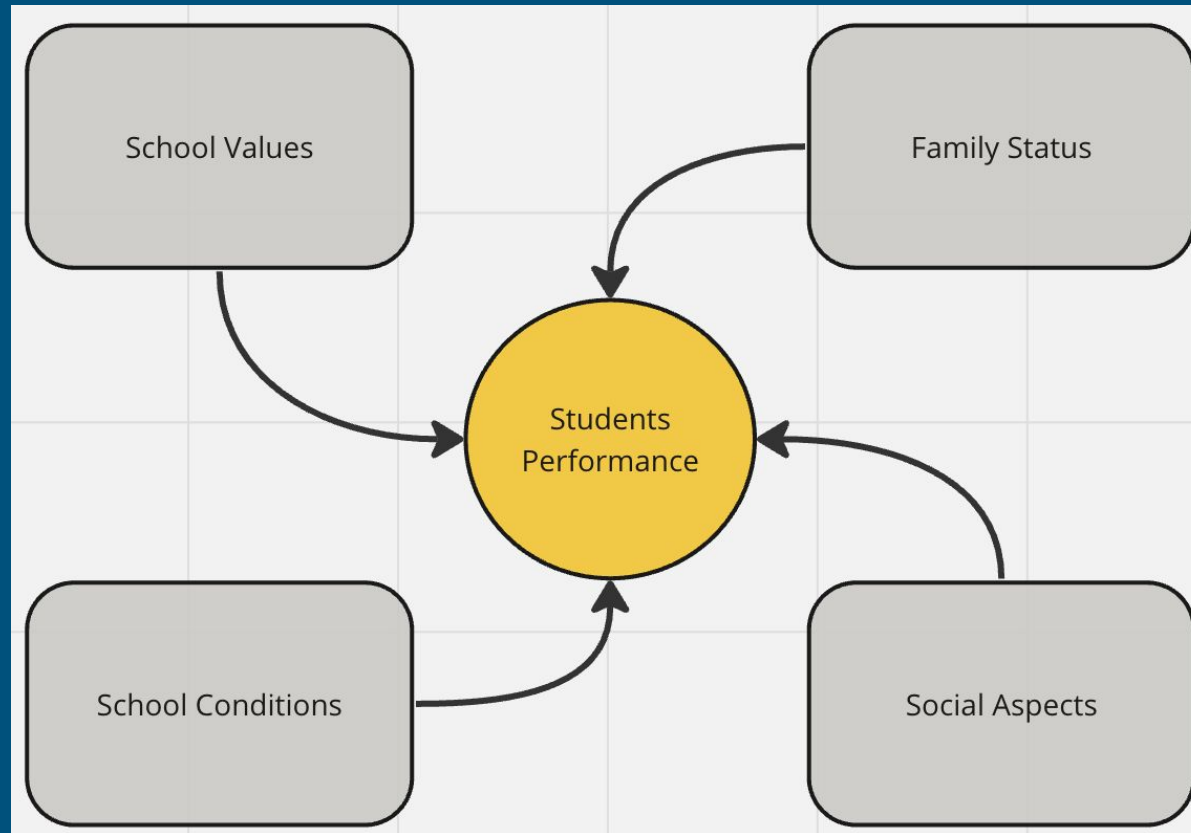
- travel time
- study time
- family support
- extra paid classes
- extra-curricular activities





# Impacts

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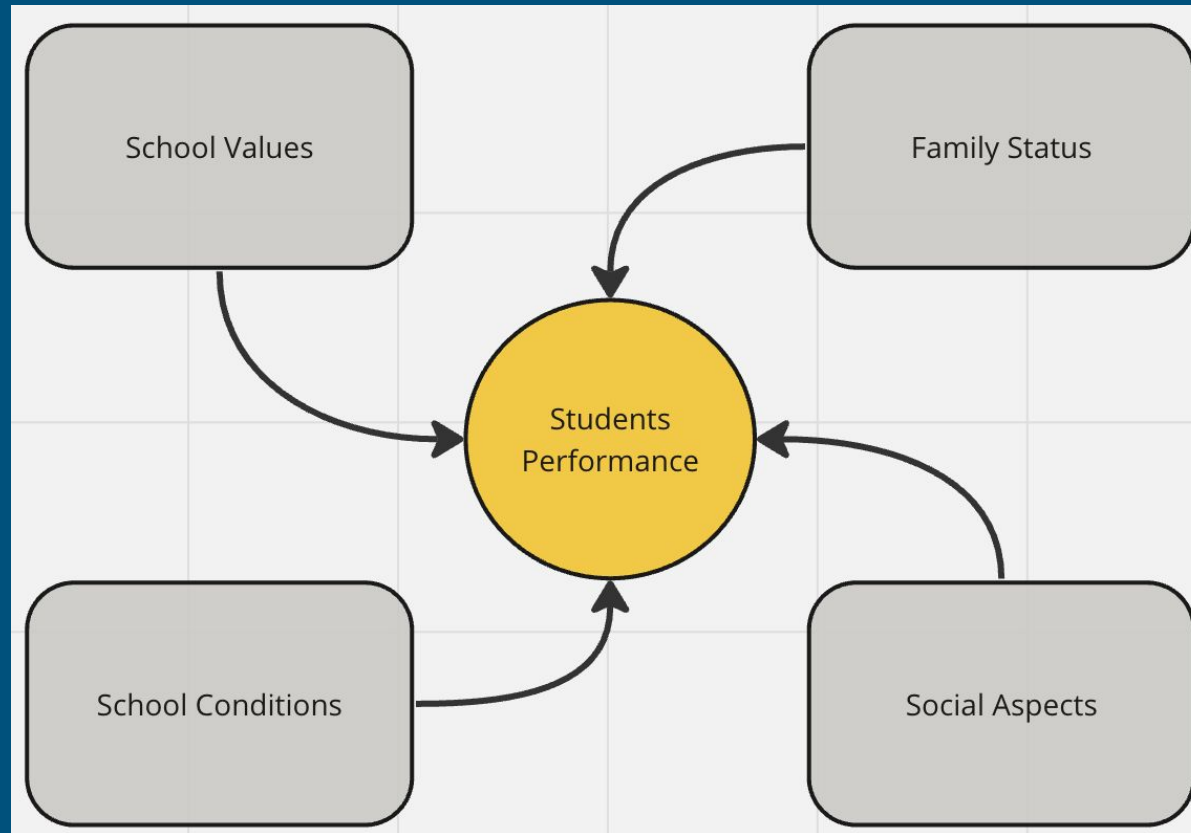


## Family Status:

- parent's cohabitations status
- family size
- mothers education
- fathers education
- mothers job
- fathers job

# Impacts

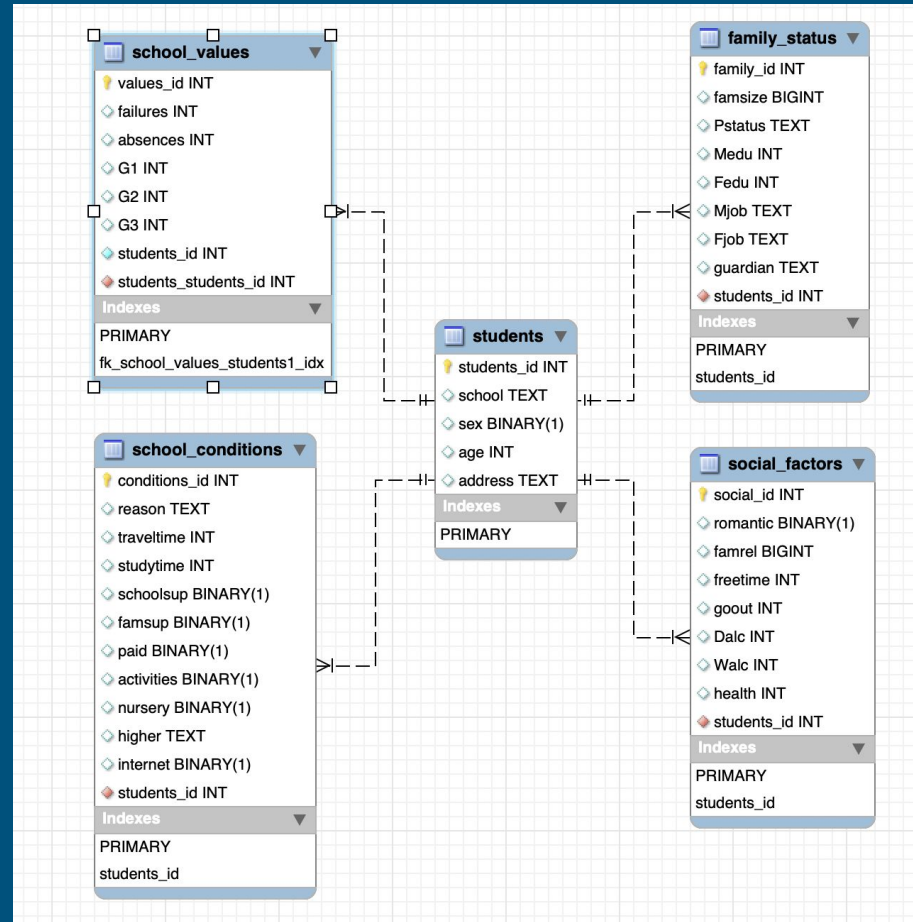
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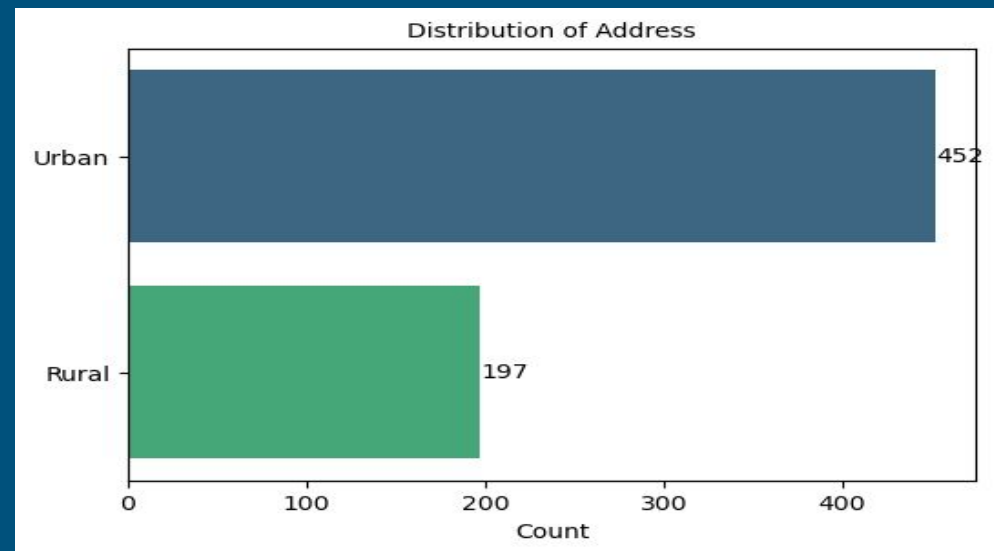
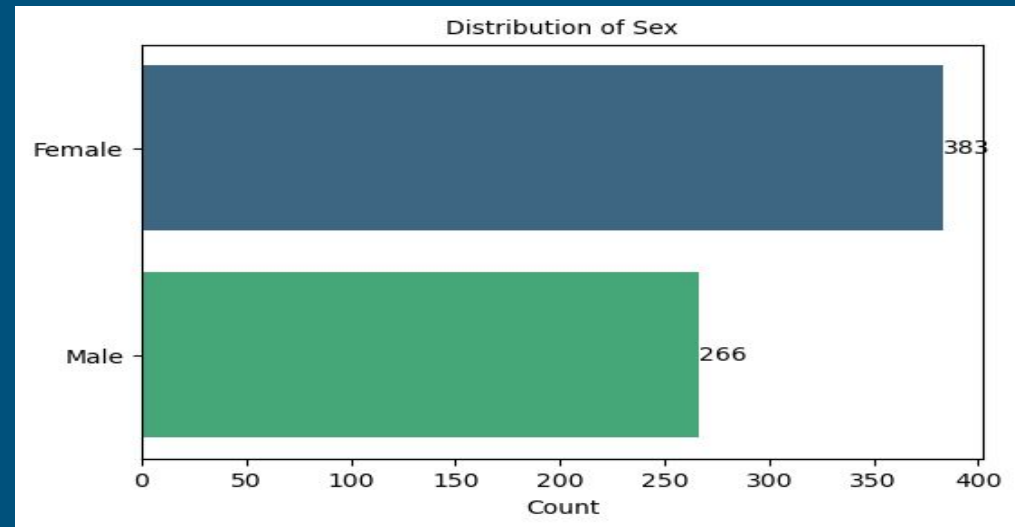
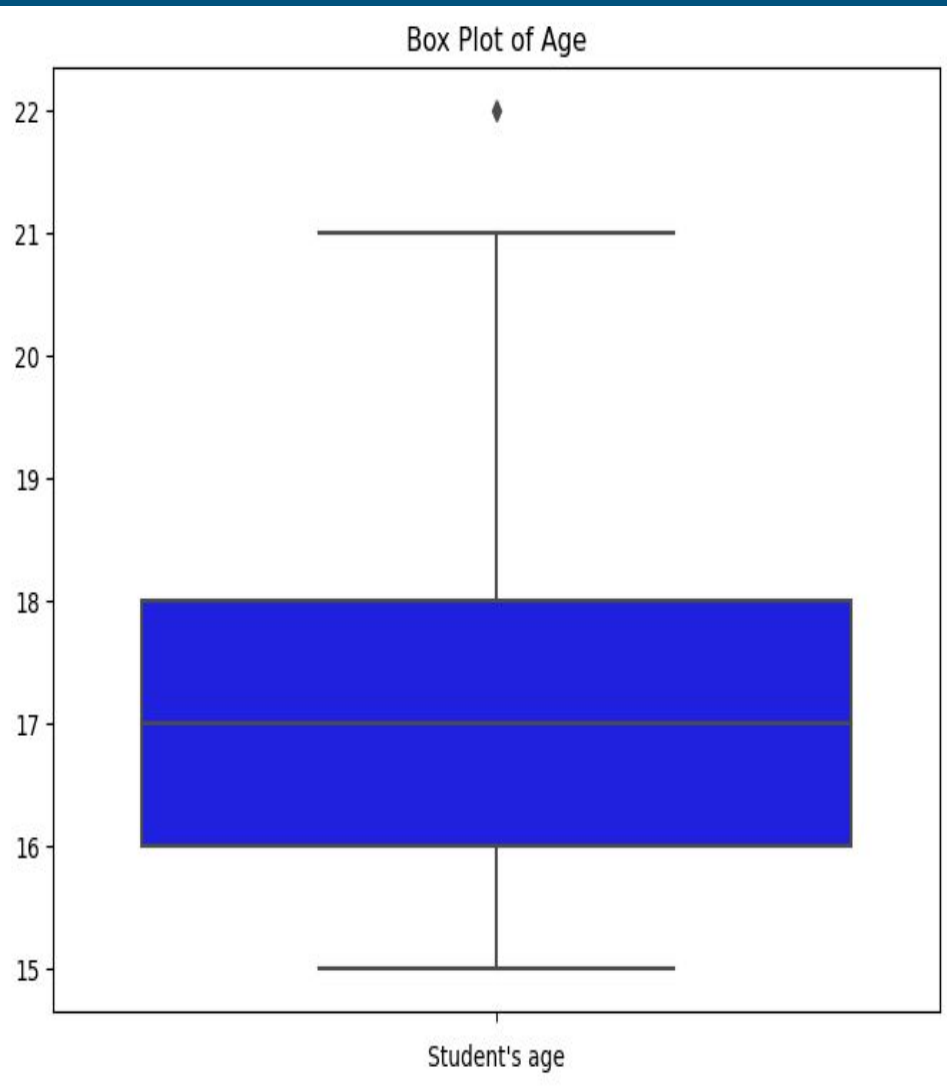
## Social Aspects:

- quality of family relationships
- free time after school
- going out with friends
- workday alcohol
- weekend alcohol

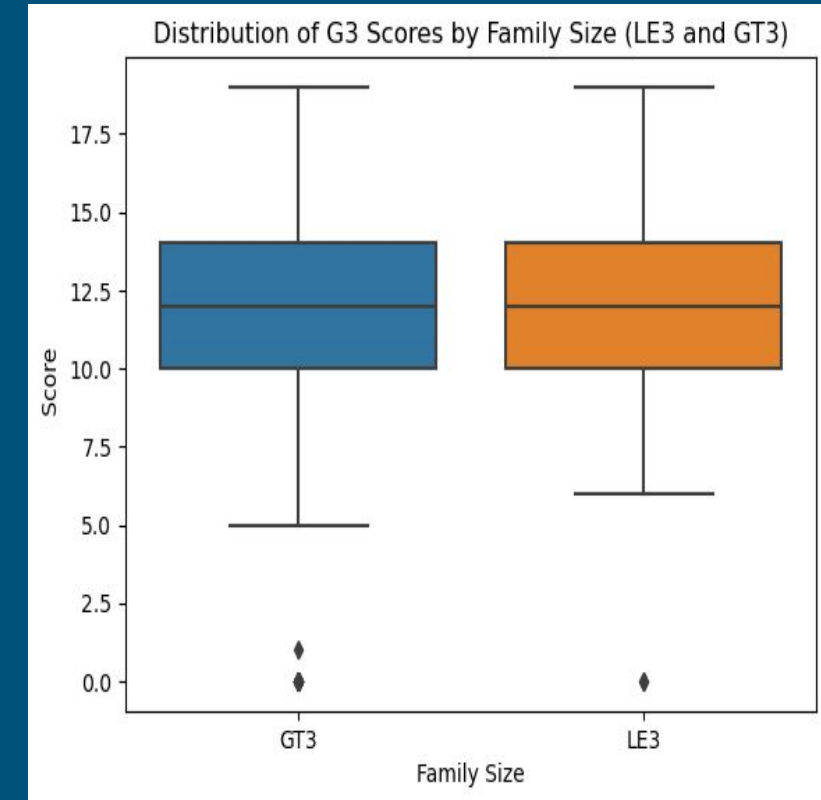
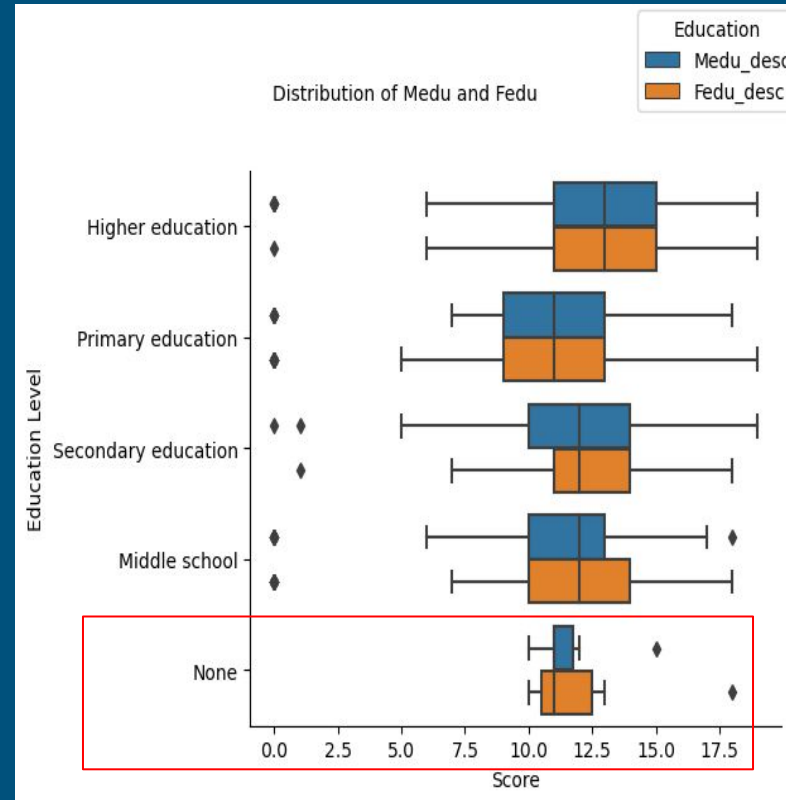
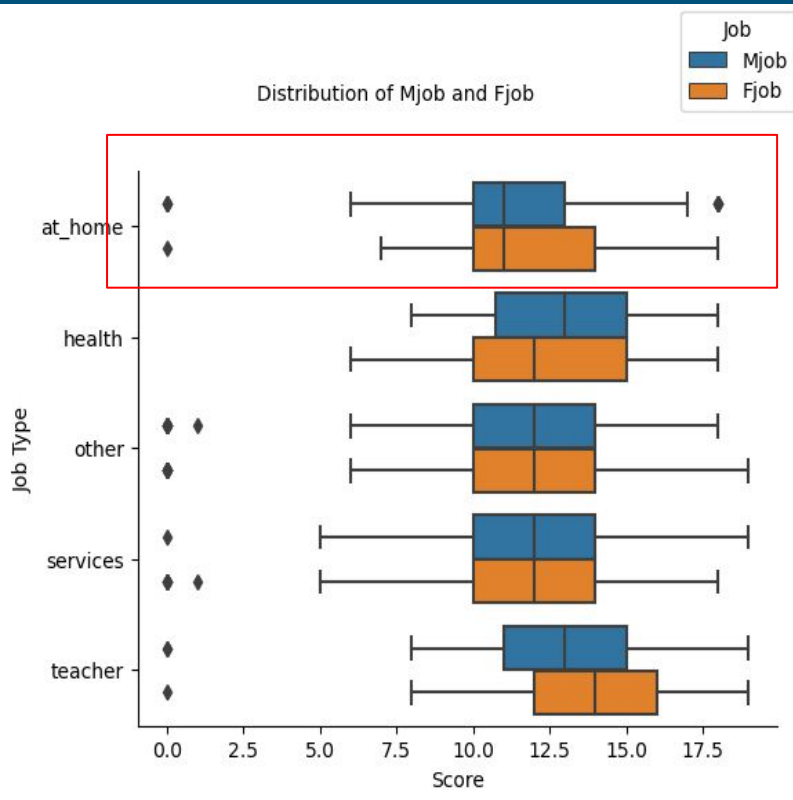
# EER Diagram



# Students Personal Data

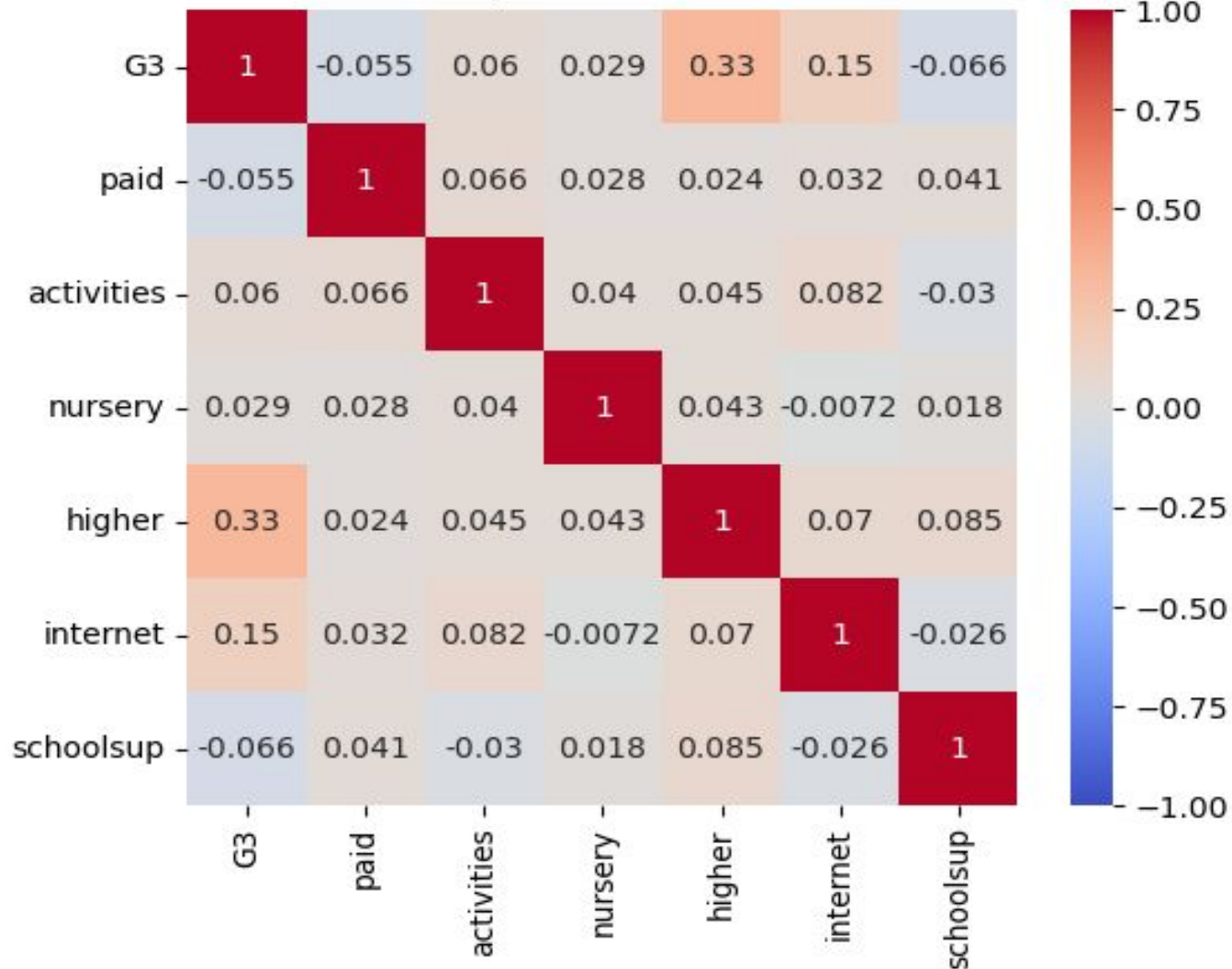


# Impact of Family Status



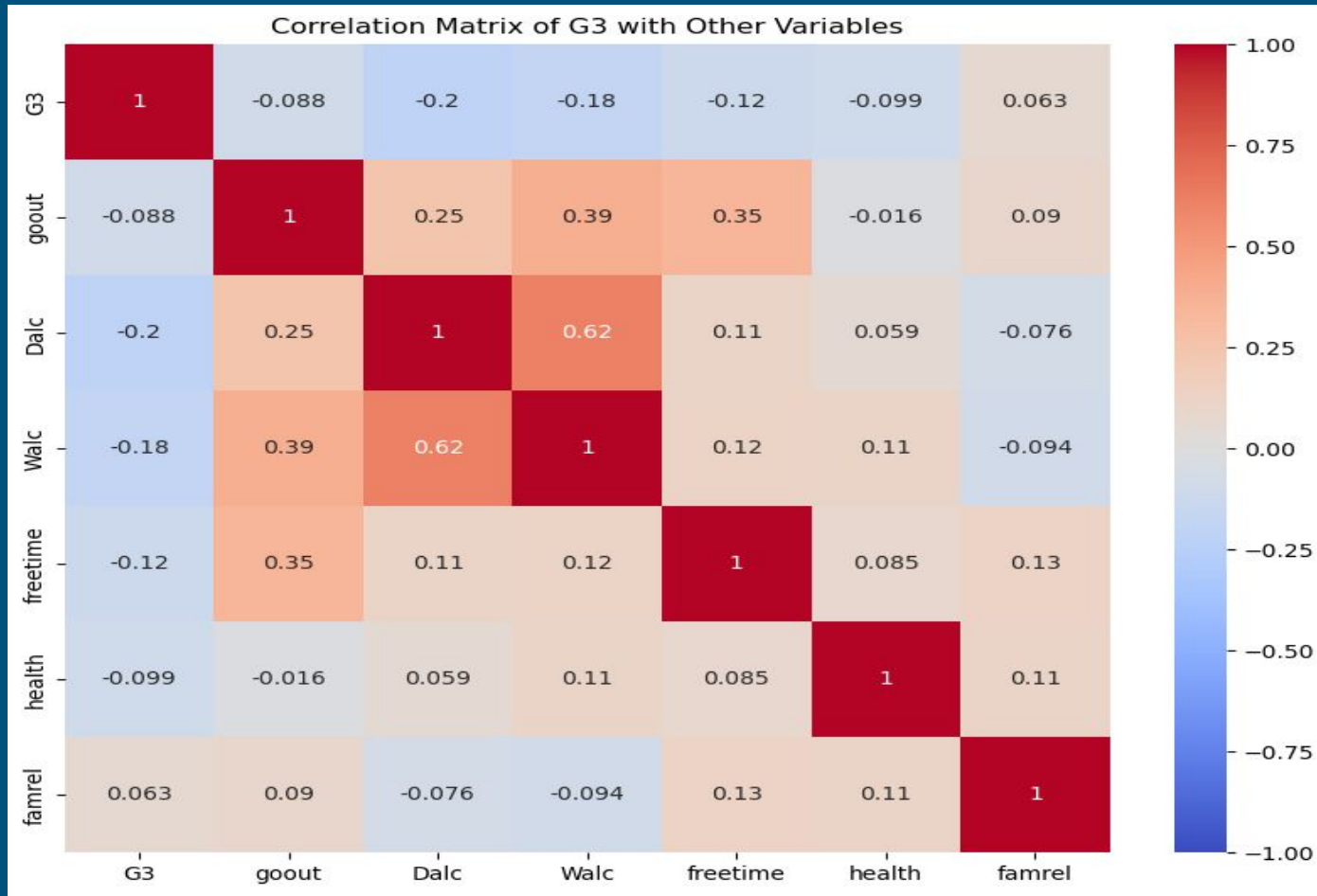
# Impact of School Conditions / Practices

Correlation matrix of school practices on Students Final exam grades



- Higher education and access to internet contribute positively towards to better performance.

# Impact of Social Parameters



- Consumption of alcohol (either weekly or daily), and freetime showed weak negative correlations.

# Conclusion: Students Performance insights

## Positive Impacts:

- **Education of Parents:**
  - Higher educational levels of parents positively influence student performance.
- **Extracurricular Activities:**
  - Participation in activities outside the classroom boosts academic achievements.
- **Access to Technology:**
  - Availability and use of technology enhance learning and performance.
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## Negative Impacts:

- **Parents Not Working:**
  - Lack of parental employment is associated with lower student performance.
- **Alcohol Consumption:**
  - Regular consumption of alcohol negatively affects student outcomes.
- **Freetime:**
  - Excessive free time shows a weak negative correlation with performance.

## Recommendations for Schools:

- **Parental Involvement:** Organizing more parent teachers meet to promote active participation of parents
- **Support Extracurricular Programs**
- **Technology Integration.**
- **Address Socioeconomic Factors**
- **Organize Health and Well-being Programs**



THANK YOU