Pillai College of Engineering
Department of Electronics and Telecommunication Engineering
Report on Project Based Learning
TE EXTC(A and B div)
Sem VI 2019-2020
Topic:Smart Glasses

The Project based Learning (PBL) concept is very important for the student. This new generation is really exposed to advanced gadgets and technologies. With the help of PBL students are utilizing subject knowledge to implement and design the problem statement given by the department. Every semester the Department suggests realistic problems and expects very simple solutions using easily available materials and components from the student.

For January-June 2020, the PBL problem statement for Third Year Electronics and Telecommunication Engineering students was to design a **Smart Glass** which requires knowledge of subjects like Microprocessors and Microcontrollers, Computer Networks, Image Processing, DBMS. We have created problem statements with different features.

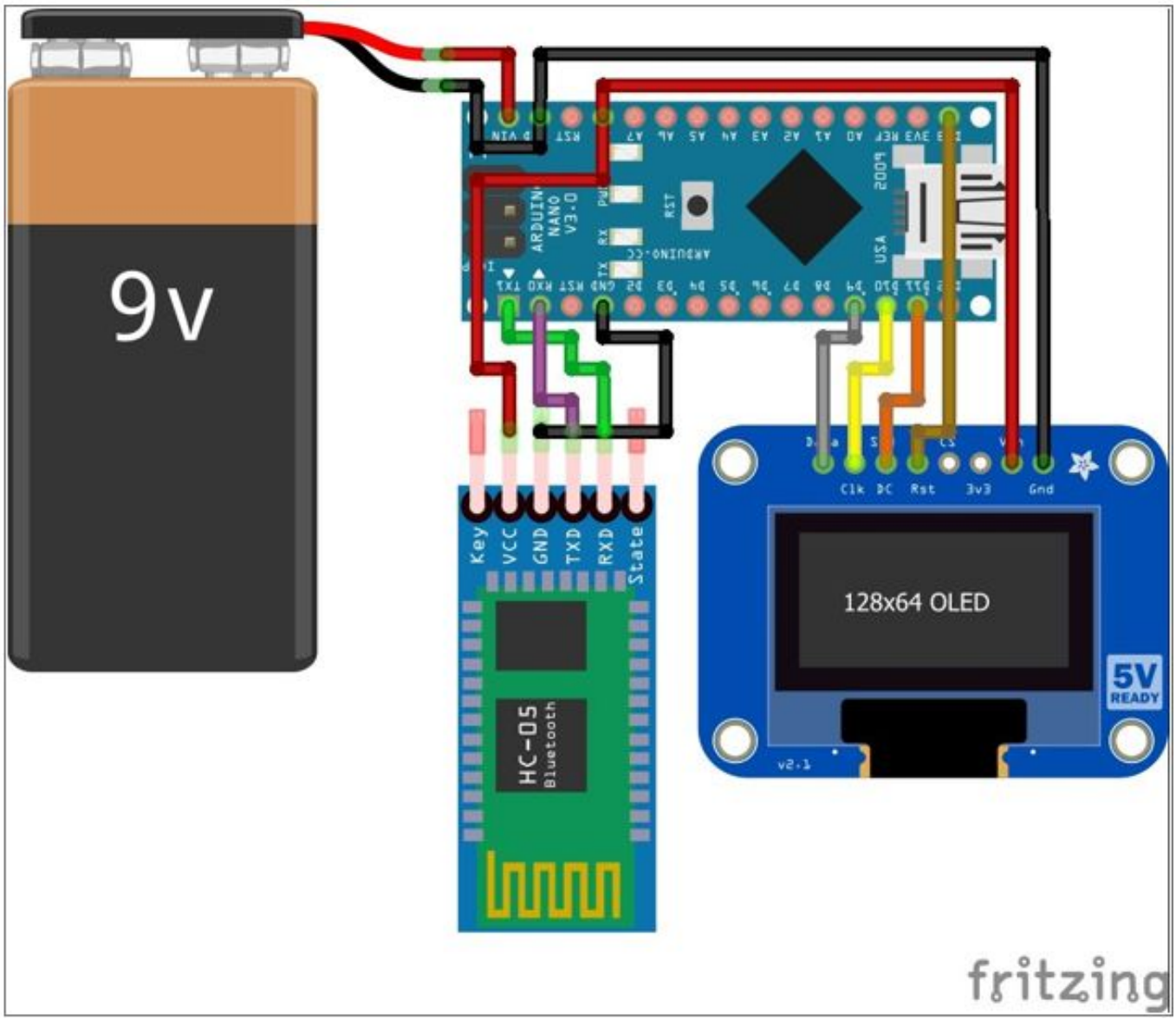
List of the Problems given to the students:

1. Smart Glass which records the video and takes photos also it should display Time and Date and SMS notifications
2. Smart glass with a feature of answering the call using set aside to key.
3. Smart Glass with sleep detector
4. Interface smart glass with Wireless stereo music device.
5. Answer the call using Flip-up Glasses
6. Design and Implement Touchpad Sliding -forward and backward feature in the Smart Glass.
7. Interface smart glasses with google assistance

36 student groups were working on different problems on Smart Glasses. Each group consists of 4 students. To identify progress of the project we conduct 1st stage PBL evaluation on 9th March 2020.

Many students have implemented the prototype and demonstrated their ideas in front of the internal examiners.

SMART GLASS



Following is Rubric evaluation sheet :

Mahatma Education Society's

Pillai College of Engineering, New Panvel

TE A.Y. 2019-20 **Department of Electronics and Telecommunication Engineering**

PROJECT BASED LEARNING			Mock Presentation 9/3/2020	
Project Title: Design of Smart Glasses				Group No.:
Made By: Name & Roll No.				
Signature				
Marks obtained in MCA (/05)				
Marks obtained in IPMV (/05)				
Marks obtained in CCN (/05)				

ORGANIZATION AND STRUCTURE	4	3	2	1
How to make compact smart Glasses?	All arguments were clearly tied to an idea and well organized.	Most arguments were clearly tied to an idea and well organized.	All arguments were clearly tied to an idea but the organization not clear.	Arguments were not clearly tied to an idea.

	4	3	2	1
UNDERSTANDING OF THE TOPIC	Demonstrates an in-depth, high-level understanding of the topic.	Demonstrates an understanding of the topic and issues.	Demonstrates a low level of understanding of the topic.	Fails to demonstrate an understanding of the topic.

What is the specification of Arduino Nano?				
What are the specifications of Sensors?				

HARDWARE IMPLEMENTATION	4	3	2	1
COMPONENTS REQUIRED	Made complete list of materials used. Explained why materials were chosen.	Made complete list of materials used.	Did not list one or two materials used. Did not show details about materials used.	List of materials was missing or showed only a few of the materials used.
Overall the project uses how many sensors?_____				

HARDWARE IMPLEMENTATION	4	3	2	1
DATA DISPLAY	All output data was represented on display effectively?	Output data was correctly displayed but less effective?	Output data was correctly displayed but some output data was missing.	Data was not displayed in a useful format.
Is the display used effectively?				
Is navigation of sensor data possible?				

Can it communicate with other devices?				
How to design 3d printed glasses case?				

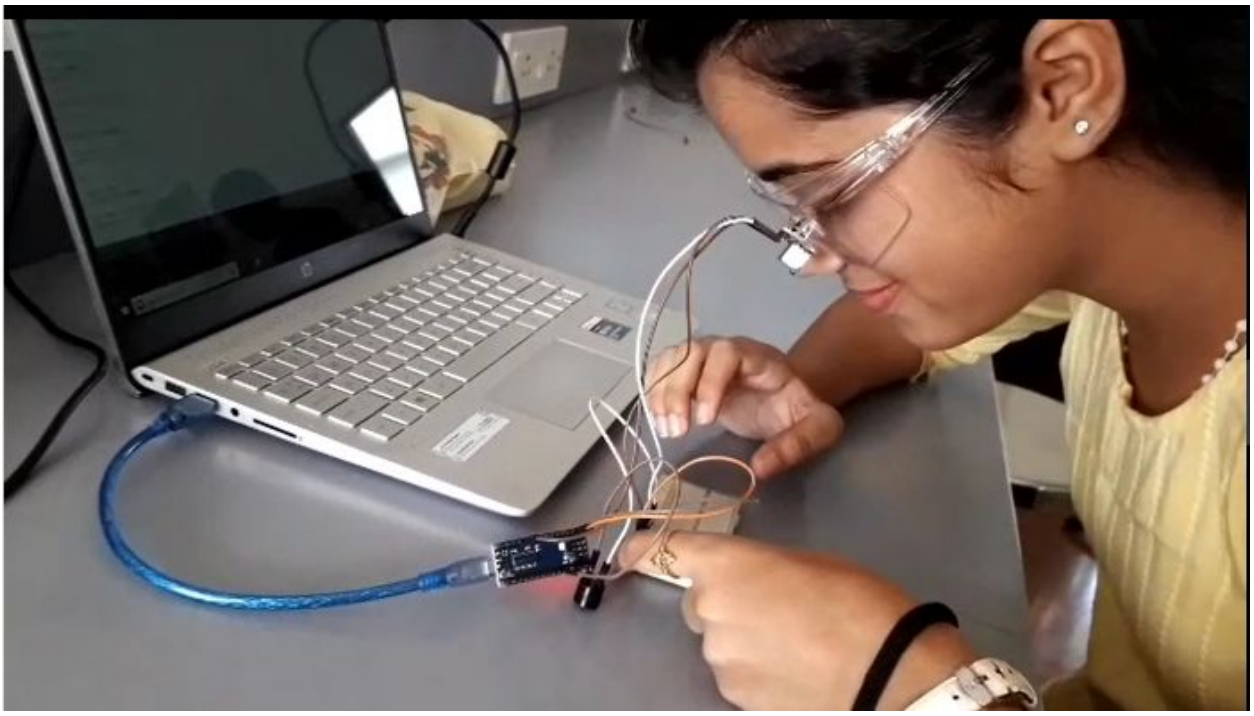
TEAM WORK	4	3	2	1
CONTRIBUTION IDEAS AND ASSISTANCE	Actively participated in all discussions and activities. Shared ideas freely. Located additional information or resources.	Shared ideas in every discussion. Attempted to locate additional resources or materials.	Participated in most discussions. Shared a few ideas.	Did not participate in any discussions.

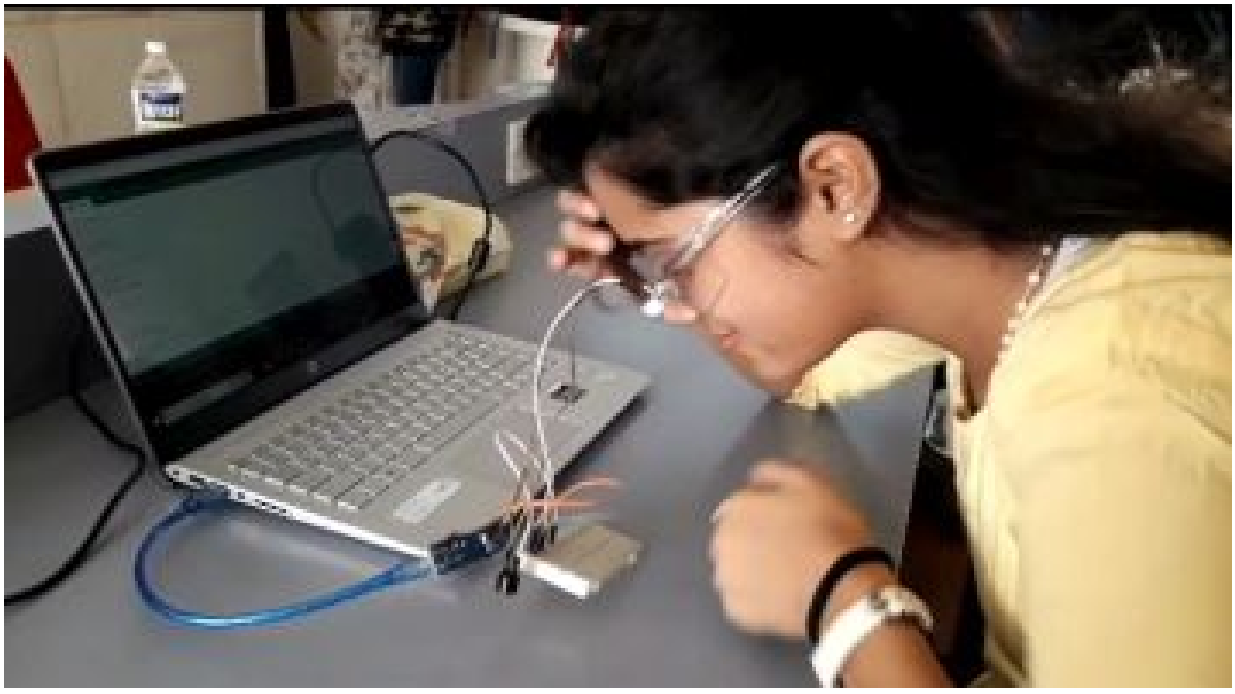
BEHAVIOR: ATTITUDE	4	3	2	1
Friendly, helpful, open, and positive	Listened to new ideas and suggestions. Was happy to implement changes. Was helpful to others and made constructive suggestions about their work. Made several positive comments about their own work and ideas of others.	Listened to new ideas and suggestions and tried to implement them. Was helpful to others. Had a positive attitude about assigned work.	Listened to new ideas and suggestions but did nothing about them. Was helpful to others. Made no supportive comments to others.	Was not open to new ideas or suggestions. Made negative comments about the project topic and work assigned.

CONCLUSIONS/RECOMMENDATIONS:

EXAMINER'S SIGNATURE

Sample Photographs



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Pillai College of Engineering

Department of Electronics Engineering

Report on Project Based Learning

TE ETRX Sem VI 2019-2020

Topic: Smart Glasses

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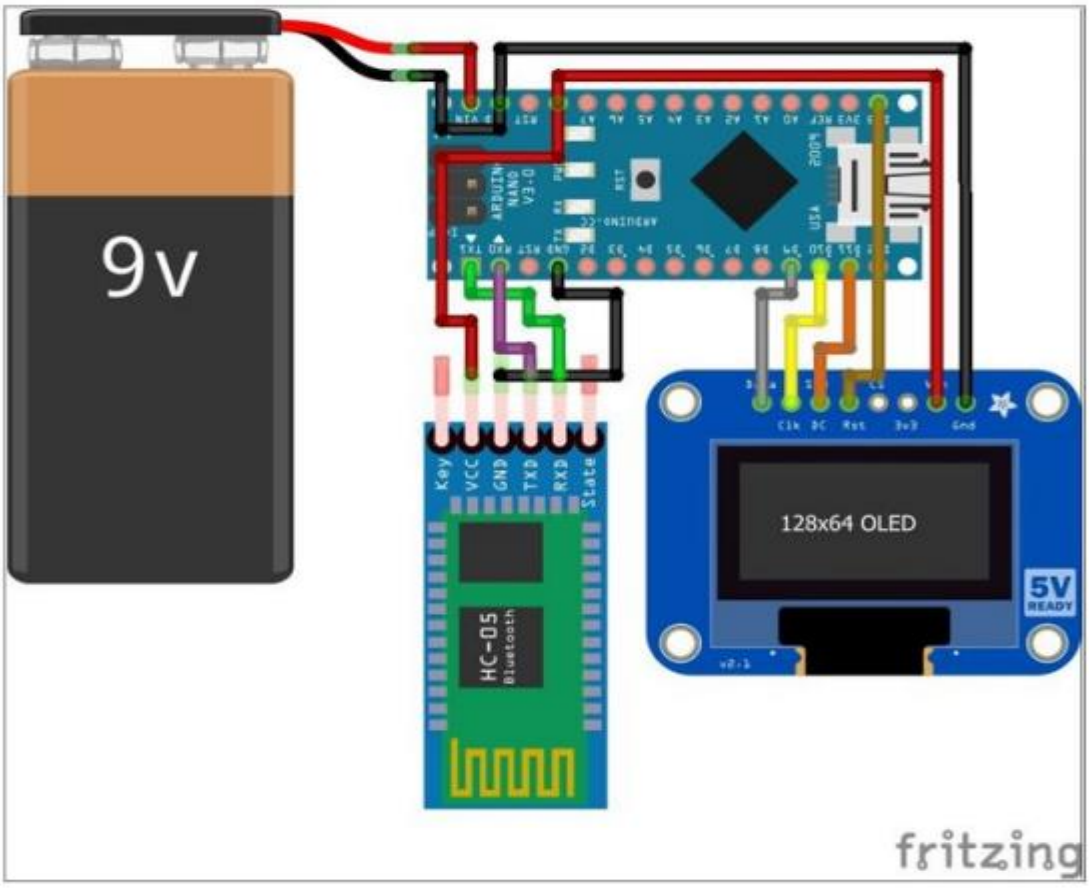
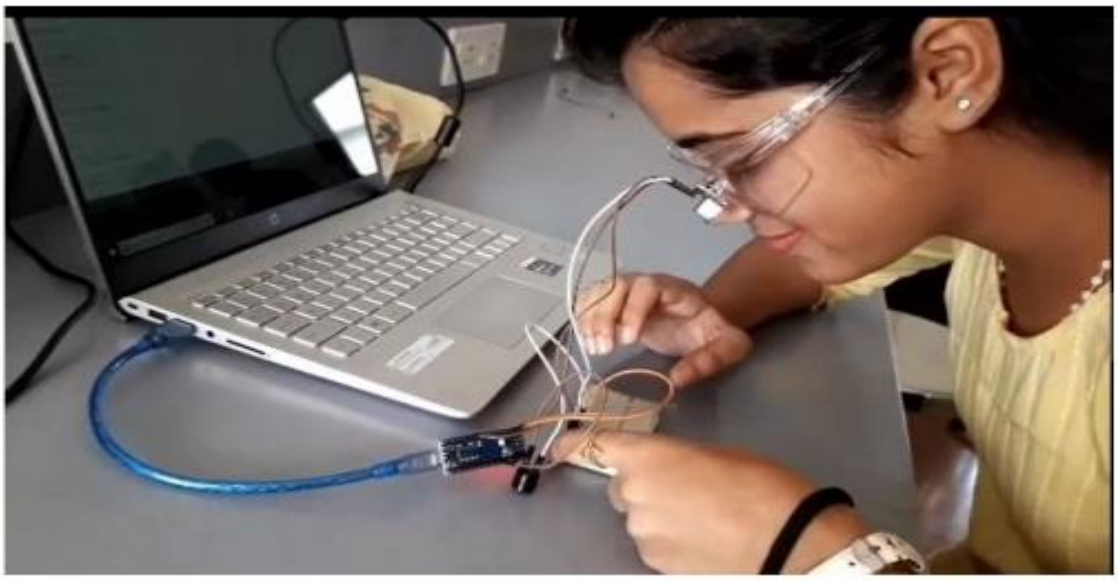
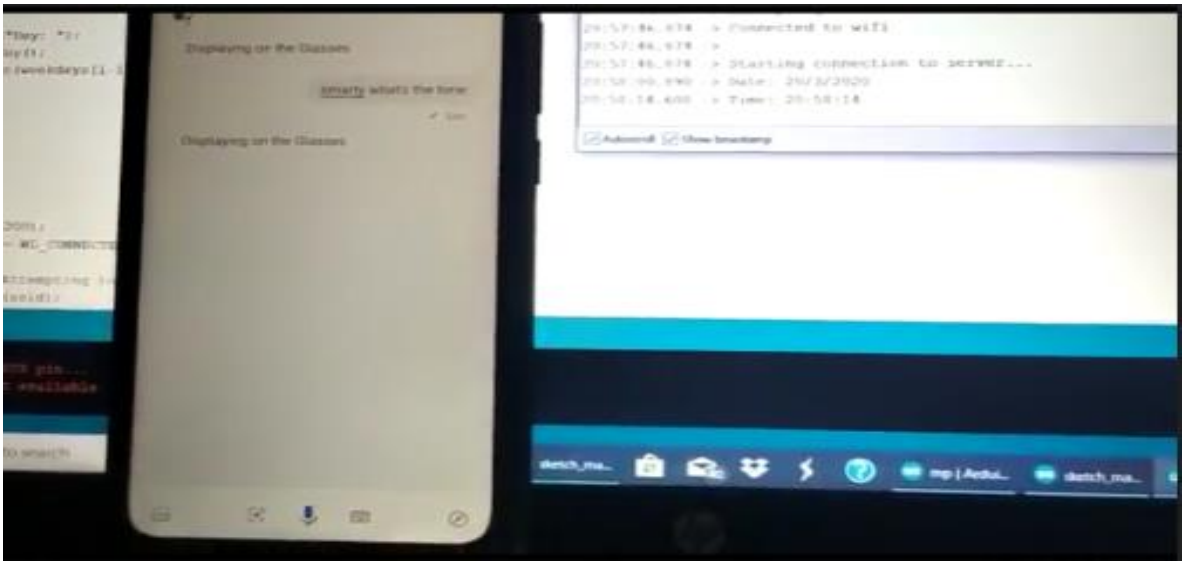
18 student groups were working on different problems on Smart Glasses. Each group consists of 3 to 4 students. To identify progress of the project we conduct 1st stage PBL evaluation on 9th

March 2020. Many students have implemented the prototype and demonstrated their ideas in front of the internal examiners.







Rubric Evaluation Sheet

Mahatma Education Society's

Pillai College of Engineering, New Panvel

TE A.Y. 2019-20 **Department of Electronics Engineering** **Sem V**

PROJECT BASED LEARNING

Project Title: Design of Smart Glasses using Arduino				Group No.:	
Made By: Name & Roll No.					
Signature					
Marks obtained in VLSID (/05)					
Marks obtained in ES-RTOS(/05)					
Marks obtained in COA/WC(/05)					

ORGANIZATION AND STRUCTURE	4	3	2	1
Is the game well designed?	All arguments were clearly tied to an idea and well organized.	Most arguments were clearly tied to an idea and well organized.	All arguments were clearly tied to an idea but the organization not clear.	Arguments were not clearly tied to an idea.
Is the speed of playing the game satisfactory?				

	4	3	2	1
UNDERSTANDING OF THE TOPIC	Demonstrates an in-depth, high-level understanding of the topic.	Demonstrates an understanding of the topic and issues.	Demonstrates a low level of understanding of the topic.	Fails to demonstrate an understanding of the topic.
Able to demonstrate the rules and flow of the game				
Are multi levels possible and how?				
Is game able to satisfy the given task?				

HARDWARE IMPLEMENTATION	4	3	2	1
COMPONENTS REQUIRED	Made complete list of materials used. Explained why materials were chosen.	Made complete list of materials used.	Did not list one or two materials used. Did not show details about materials used.	List of materials was missing or showed only a few of the materials used.
Hardware required for the game.				

HARDWARE IMPLEMENTATION	4	3	2	1
DATA DISPLAY	All output data was represented on display effectively?	Output data was correctly displayed but less effective?	Output data was correctly displayed but some output data was missing.	Data was not displayed in a useful format.
What is specification of Display?				
Is the display used effectively?				

BEHAVIOR: ATTITUDE	4	3	2	1
Friendly, helpful, open, and positive	Listened to new ideas and suggestions. Was happy to implement changes. Was helpful to others and made constructive suggestions about their work. Made several positive comments about their own work and ideas of others.	Listened to new ideas and suggestions and tried to implement them. Was helpful to others. Had a positive attitude about assigned work.	Listened to new ideas and suggestions but did nothing about them. Was helpful to others. Made no supportive comments to others.	Was not open to new ideas or suggestions. Made negative comments about the project topic and work assigned.

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EXAMINER'S SIGNATURE