



King Abdul Aziz University
Faculty of Engineering
Electrical and Computer Engineering
Department
EE306 - Electrical Engineering
Technologies
Spring 2015

Portfolio

"Rain Alarm"

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Instructors:

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Submission date: May 3, 2015

Organizing

Guide

Evaluating

proves the
skills



Scope:

A portfolio is a collection of artifacts that demonstrate the skills, personal characteristics and accomplishments. They are most commonly used in creative fields such as engineering. So, this portfolio will document and organize all the work of the project that we have done during the course. It sums up and shows in brief whatever it takes to do this project successfully. Finally, the portfolio is intended to achieve the objectives which are: organization and evaluation.

The portfolio will include:

- ✓ The team members and their role.
- ✓ The agenda of the meetings.
- ✓ The progress of developing the project.
- ✓ Final report.

The Team:

In the beginning of this portfolio, we will start with the team members and their roles in the project which is one of the very important objectives of the portfolio. In order to become an effective and productive team we divided the works between us fairly and help each other. So, because of that we can produce high quality work during the course and be cooperative team. Our team have many strength points such as: the team is very productive, the members are comfortable with each other, stay on track when we are together, attend prepared to the meetings, learn from each other and we have developed ways to resolve conflict and reach consensus.

The role of a team member is to share collective responsibility for the performance of the team, to be an effective team player and undertake assigned work within the agreed timescales. A team member will usually report through to a team leader. The following table (Table1) shows the team member and their role in the team.

Member Name	Role	Description of The Role
	Leader	Provides direction, instructions and guidance to the team. Develop a strategy the team will use to reach its goal, clarify the instructions to team members, listen to team members' feedback, monitor team members' participation to ensure the training they providing is useful and also to see if any additional training is needed.

	Organizer	The liaison between the Coordinator and the team, collect information and the reports from the team as requested by the Coordinator, remind the team of upcoming deadlines, arrange team meetings, advise team members on how to develop more productive work and prevent the conflict between the members.
	Timekeeper	Informs the team of the beginning time and ending time - with enough time for the members to begin and come to an end to the discussion, indicates when the group is using more time than available on one issue and remind them of the number of tasks and time remaining and helps the team use their time on issues that the whole team is needed.
	Summarizer	Record, gather and keeps all the data relating to the needs of the project and present it in a format which the team can easily understand and review the agenda for action items.

The Agenda of Meetings:

A meeting is a gathering of two or more people that has been convened for the purpose of achieving a common goal through verbal interaction, such as sharing information or reaching agreement. Meetings may occur face to face or by communications technology such as: telephone conference call, Skyped conference call or a videoconference. The following pages show the agenda of the meeting of the team.



AGENDA FOR MEETING (1)

(Selecting of the Project)

Member No.	Member Name	Role
1		Leader
2		Organizer
3		Timekeeper
4		Summarizer



Meeting time: 2-3 Pm

Meeting place: The lab of engineering faculty

Meeting Date: Wednesday, April 15

No.	Task Description	Responsible Member	Comments	Estimated time
1	Contact before work and scheduling	Leader	Before the meeting the leader contacts with all team members to search about simple circuit projects.	10min
2	discussion	Everyone	We discussed each project to select two of them that satisfied all the required attributes.	15min
3	Working	Everyone	We start thinking about each project and how each one will be completed and then we used multi voting method (the methods we learned on IE201) to select the best one.	20min
4	Distribution of upcoming work	Timekeeper	The timekeeper (____) volunteered to perform the next step which is buying the components of the circuit.	15min

The results

We selected the best project based on the steps above which is (Rain alarm), also We discussed the whole project and how each step will be done.

AGENDA FOR MEETING (۲)

Member No.	Member Name	Role
1		Leader
2		Organizer
3		Timekeeper
4		Summarizer



Meeting time: 8-9:30 Am

Meeting place: The Laboratory

Meeting Date: Tuesday, April 21

No.	Task Description	Responsible Member	Comments	Estimated time
1	Contact before work and scheduling	Leader	Before the meeting the leader contacts with all team members to bring the components of the circuit and going to the laboratory.	10min
2	discussion	Everyone	We discussed about each component to know how it works and how it will be connected in the circuit.	30min
3	Working	Everyone	We start connect the elements in the breadboard and measure the voltage in every component to make sure the connect is true.	30min
4	Distribution of upcoming work	Everyone	We determine another meeting to talk about the report of the project and to distribute the work between us.	20min

The results

Our circuit is working and we learn about new components: its Function and its benefits.

AGENDA FOR MEETING (۳)

Member No.	Member Name	Role
1		Leader
2		Organizer
3		Timekeeper
4		Summarizer



Meeting time: 3-4 Pm

Meeting place: The library of engineering faculty

Meeting Date: Wednesday, April 29

No.	Task Description	Responsible Member	Comments	Estimated time
1	Contact before work and scheduling	Leader	Before meeting the leader contacted with all team members through e-mail to read about progress report from the files were sent by the instructor, specially the rubric to be ready for discussion. Also, the leader explaining the tasks of this meeting.	10min
2	discussion	Everyone	We discussed each part of the progress report briefly and determining the task that each member have to do.	15min
3	Working	Everyone	We start testing the performance and discussing the principle working of the project, working on the result and discussion of the project and Organizing the agenda of each meeting.	20min
4	Distribution of upcoming work	Organizer	The Organizer (____) determine deadline to finish the report. Also, we will collect and arrange the report to prepare for submission.	15min

The results

We have finished all the tasks of the final report and portfolio, we have documented and checked the rubric in order to make sure that we have achieved all the required tasks of the report.

Fifth phase:

In this phase, two tests were conducted after building the circuit to check if it behaves well. The two tests were conducted on the circuit's output voltage and the current. The tests were conducted by using two methods which are: using the oscilloscope (since it represents the voltage curve over time) and the multi-meter.

Sixth phase:

Finally, the components of the project was soldered on the vero board. Also, the performance of the project was tested and evaluated by the team members. The following table (Table 2) shows the time consumed to complete the phases of the project.

Table2. The consumed time to complete the phases.	
Phases	Consumed Time
<ul style="list-style-type: none">○ First Phase which contains:● Collecting the relevant information regarding to the project.● Drawing the schematic diagram of the rain alarm.● Analysing the principle working.	<ul style="list-style-type: none">✓ Two days.✓ One day.✓ One days.
<ul style="list-style-type: none">○ Second phase which contains:● Buying the matireals of the project.	<ul style="list-style-type: none">✓ Two days.
<ul style="list-style-type: none">○ Third phase which contains:● Testing the components such as: resistor, capacitor and transistor.	<ul style="list-style-type: none">✓ One hour.
<ul style="list-style-type: none">○ Fourth phase which contains:● Constrctuing and bulding the project.	<ul style="list-style-type: none">✓ Two Days.
<ul style="list-style-type: none">○ Fifth phase which contains:● Measuring and testing the output voltage and current.	<ul style="list-style-type: none">✓ One hour.
<ul style="list-style-type: none">○ Sixth phase which contains:● Bulding the project on the vero board.	<ul style="list-style-type: none">✓ One Day.

The Performance of The Team:

All of the team members were very helpful and work cooperatively by cooperated with each other as one person. So, because of that the project has finished successfully before the deadline.