A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A)

(Re-Accredited with 'B' Grade by NAAC)
(Affiliated to Adikavi Nannaya University)
Jagannaickpur, Kakinada.

DEPARTMENT OF COMPUTER SCIENCE

స్త్రీవిద్యాప్రవర్ధతాం

PROJECT DISPLAY

on the occasion of

NATIONAL SCIENCE DAY

CELEBRATIONS

2019-2020

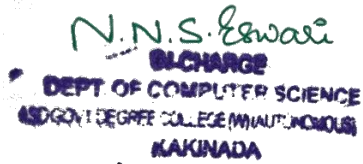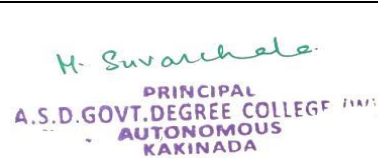# A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A)
(Re-Accredited with 'B' Grade by NAAC)
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Jagannaickpur, Kakinada

DEPARTMENT OF COMPUTER SCIENCE

Activity Register 2019-2020

Date	28-02-2020
Conducted through (DRC/JKC/ELF/NCC/NSS/ Departments etc.)	Department of Computer Science
Nature of Activity (Seminar/Workshop/Extn. Lecture etc.,)	National Science Day Celebrations
Title of the Activity	Project Display
Name of the Department/Committee	**COMPUTER SCIENCE**
No. of students participated	48
Brief Report on the activity	To make the students to aware on recent technological advancements and to improve their technical skills
Name of the Lecturers who Planned & conducted the activity	N. Naga Subrahmanyeswari G.Satya Suneetha
Signature of the Dept. In-Charge /Convener of the Committee	N.N.S.Eswari INCHARGE DEPT OF COMPUTER SCIENCE ASD GOVT DEGREE COLLEGE (W)(AUTONOMOUS) KAKINADA
Signature of the Principal	H. Suvarchala PRINCIPAL A.S.D.GOVT.DEGREE COLLEGE (W) AUTONOMOUS KAKINADA
Remarks	

A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A)
JAGANNAICKPUR, KAKINADA.

స్త్రీ విద్య ప్రవర్ధతాం

DEPARTMENT OF COMPUTER SCIENCE

PROJECT PRESENTATION

2019-2020

The Department of Computer Science had organized a Project Display by III B.Sc.(M.P.Cs.) and III B.Com. (C.A.) students on the occasion of National Science Day. The following students had participated in the Project Presentation on 28-02-2020 at 2:00 P.M. in Computer Lab-I.

Signature of the Lecturers

List of students participated in the Poster Presentation

S. No	Regd. No.	Name of the Student	Class	Name of the Project Displayed
1	172056	G .Roshini	III B.SC(MPCs)	Water Level Indicator
	172068	M.Siva Parvathi		
	172078	T.Ramya		
	172085	K.Monika		
	172095	S.Kavya		
	172099	T.Mahalakshmi		
2	172044	A.Sai Maha Lakshmi	III B.SC(MPCs)	Soil Moisture Indicator
	172046	G.Hema Sri		
	172062	K.Rama Devi		
	172087	K.Rajeswari		
	172101	Y.Kusuma		
3	172076	Sk.Basheera	III B.SC(MPCs)	Smart Dust Bin
	172083	D.Harika		
	172097	S.Sirisha		
	172098	S.Sirisha		
	172102	M.Ramya Sri		
4	172045	D.Vijaya Lakshmi	III B.SC(MPCs)	Smoke Indicator
	172055	D.Vasudha		
	172065	M.Meena Kumari		
	172066	M.Satya Sowmya		
	172084	G.Suvarna		
5	173152	B.Venkata Ramya	III B.Com(CA)	Automatic Street Light
	173124	A.Lakshmi Syamala		
	173123	P.Alekhya		
	173125	Ch.Mounika		
	173126	D.Kanchana		
	173152	Y.Tirumala Ramani		
6	173127	E.Navya Ratna	III B.Com(CA)	Smoke Detector
	173132	M.Satya Srija		
	173131	M.Lakshmi Surya Vathi		
	173130	M.Mary Ratnam		
	173128	G.Gayathri Devi		
7	173135	T.Sai Sandhya	III B.Com(CA)	Automatic Dust Bin
	173136	V.Durga Devi		
	173133	P.Uma Devi		
	173137	A.Madhavi		
	173134	R.Sai Sowmya		
8	173141	K.Nandeeswari	III B.Com(CA)	Eye Blink Sensor
	173143	M.Gowthami		
	173142	M.Chinnari		
	173138	A.Leela Durga		
9	173146	T.Durga Bhavani	III B.Com(CA)	Automatic Water Dispenser
	173148	V.Syamala Kumari		
	173145	N.Devi Sri		
	173144	N.Papa		
	173149	V.Rajeswari		
	173147	U.Mallika		

Brief Report on the Activity

The Department of Computer Science has organized Project Display by III B.Sc. (M.P.Cs) and III B.Com (CA) students on 28-02-2020 at computer lab-I for the students of the college as well as for the students of St. Xavier's High School. The objective of this activity is dissemination of existing information and to stimulate dialogue between the viewer and the presenter. 9 teams have participated in the event and presented the projects in IoT technologies such as Soil Moisture Indicator, Automatic Street Light, Smoke Detector etc.,

Automatic Street Light

It needs no manual operation for switching ON and OFF. When there is a need of light it automatically switches ON. When darkness rises to a certain level then sensor circuit gets activated and switches ON and when there is other source of light i.e. daytime, the street light gets OFF. The sensitiveness of the street light can also be adjusted. In our project we have used four L.E.D as a symbol of street lamp, but for high power switching one can connect Relay (electromagnetic switch) at the output of pin 3 of I.C 555 that will make easy to turn ON/OFF any electrical appliances that are connected through relay.

This circuit uses a popular timer I.C 555. I.C 555 is connected as comparator with pin-6 connected with positive rail, the output goes high(1) when the trigger pin 2 is at lower then 1/3rd level of the supply voltage. Conversely the output goes low (0) when it is above 1/3rd level. So small change in the voltage of pin-2 is enough to change the level of output (pin-3) from 1 to 0 and 0 to 1. The output has only two states high and low and can not remain in any intermediate stage. It is powered by a 6V battery for portable use. The circuit is economic in power consumption. Pin 4, 6 and 8 is connected to the positive supply and pin 1 is grounded. To detect the presence of an object LDR have been used and a source of light.

LDR is a special type of resistance whose value depends on the brightness of the light which is falling on it. It has resistance of about 1 mega ohm when in total darkness, but a resistance of only about 5k ohms when brightness illuminated. It responds to a large part of light spectrum. We have made a potential divider circuit with LDR and 100K variable resistance connected in series. As voltage is directly proportional to conductance so more voltage is derived from this divider when LDR is getting light and low voltage in darkness. This divided voltage is given to pin 2 of IC 555. Variable resistance is so adjusted that it crosses potential of 1/3rd in brightness and fall below 1/3rd in darkness.

Sensitiveness can be adjusted by this variable resistance. As soon as LDR gets dark the voltage of pin 2 drops 1/3rd of the supply voltage and pin 3 gets high and LED or buzzer which is connected to the output gets activated.

Smoke Detector

A **smoke detector** is a device that senses smoke, typically as an indicator of fire. Commercial security devices issue a signal to a fire alarm control panel as part of a fire alarm system, while household smoke detectors, also known as **smoke alarms**, generally issue a local audible or visual alarm from the detector itself or several detectors if there are multiple smoke detectors interlinked.

Smoke detectors are housed in plastic enclosures, typically shaped like a disk or square about 150 millimetres (6 in) in diameter and 25 millimetres (1 in) thick, but shape and size vary. Smoke can be detected either optically (photoelectric) or by physical process (ionization); detectors may use either, or both, methods. Sensitive alarms can be used to detect, and thus deter, smoking in areas where it is banned. Smoke detectors in large commercial, industrial, and residential buildings are usually powered by a central fire alarm system, which is powered by the building power with a battery backup.

Automatic Dust Bin

The main concept behind the Smart Dustbin using Arduino is Object Detection. A simple methodology is implemented , where the Ultrasonic Sensor is placed on top of the dustbin's lid and when the sensor detects any object like a human hand, it will trigger Arduino to open the lid.

The **smart dustbin** is a carefully designed solution that solves the social issue of waste disposal, the **smart dustbin** identifies the kind of material being thrown inside it and segregates it into bio or non biodegradable. The **dustbin** also comes with an option to provide wifi as an incentive of throwing garbage.

Eye Blink Sensor

The Objective of this project is to develop a system to keep the vehicle secure and protect it by the occupation of the intruders. The **eye**-**blink sensor** works by illuminating the **eye** and eyelid area with infrared light, then monitoring the changes in the reflected light

using a phototransistor and differentiator circuit. The exact functionality depends greatly on the positioning and aiming of the emitter and **detector** with respect to the **eye**.

This Eye Blink sensor sense the eye blink using is infrared . The Variation Across the eye will vary as per eye blink . If the eye is closed the output is high otherwise output is low. This product is strictly restricted for hobby projects and not recommended for real time use.

Automatic Water Dispenser

The Concept behind the **Automatic Water Dispenser** is very simple. **HCSR04 Ultrasonic Sensor** is used to check if any object such that the glass is placed before the dispenser. A solenoid valve will be used to control the flow of water, which is when energised the water will flow out and when de-energised the water will be stopped. An Arduino program is written which always checks if any object is placed near the tap, if yes then the solenoid will be turned on and wait till the object is removed, once the object is removed the solenoid will turn off automatically thus closing the supply of water.

Water level indicator

It is a simple, automatic water-level controller for overhead tanks that switches on/off the pump motor when water in the tank goes below/above the minimum/maximum level. The water level is sensed by two floats to operate the switches for controlling the pump motor.

The Water Level Indicator employs a simple mechanism to detect and indicate the water level in an overhead tank or any other water container.The sensing is done by using a set of nine probes which are placed at nine different levels on the tank walls (with probe 9 to probe 1 placed in increasing order of height, common probe (i.e. a supply carrying probe) is placed at the base of the tank). The level 8 represents the "tank full" condition while level 0 represents the "tank empty" condition.

Soil Moisture indicator

This is a simple Arduino project for a soil moisture sensor that will light up a LED at a certain moisture level. It uses Arduino Duemilanove microcontroller board. Two wires placed in the soil pot form a variable resistor, whose resistance varies depending on soil moisture. This variable resistor is connected in a voltage divider configuration, and Arduino collects a voltage proportional to resistance between the 2 wires.Insert the 2 probes (wires, pcb) in the dry soil and measure the resistance value and then pour water and measure it again. It used a mid value for the resistor (eg: $50k\Omega$ for $100k\Omega$ in dry soil and $10k\Omega$ in wet).

The other method to find the resistor's value is to try different values or use a potentiometer. Insert the probes into the soil that has the desired moisture when to light up the LED and signal that the plant needs water. Adjust the potentiometer and check the point at which it starts to light. Measure the potentiometer current value and replace it with a fixed resistor.

N.N.S.Eswari
Signature of the HOD
IN - CHARGE
DEPT OF COMPUTER SCIENCE
ASD GOVT DEGREE COLLEGE (W) (AUTONOMOUS)
KAKINADA

Students & Faculty of St.Xavier's School at Project Display

Students of III B.Sc(M.P.Cs.) & III B.Com.(C.A.) describing the working of the Project to the students of St.Xavier's School

Smt. M.Suvarchala, Principal & Dr. D.Chenna Rao, Vice-Principal, at the PROJECT DISPLAY

Faculty & Students with the Projects being Displayed