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Today a general, there is an increasing and widespread need for robots assisting different to assist with a range of human activities goes up. The goal of the present project This study aims is developeto develop a general-purpose frame-work, which provide framework that provides facilities for attaching and fitting different kindstypes of sensors and actuators. These general purpose This framework gives a will provide an easy way tooto turn general-purpose robot with arobots into special-function one ones. The final concrete ultimate goal of is present developement is to developing the to develop an autonomous robotic assisting clinically robot to assist clinical patients and the or elderly person's. The attached sensors collecting collect information using from the surrounding worlds robot's surroundings and send it to a field programmable gate array (FPGA) board. The FPGA broad will, which controls the sensor's sensors and processed processes the measured values. With Based on the measured data, the FPGA board can controls robots-control the robot's movement. The chosen implementation platform choosen was a Nexys 3 Spartan-6 FPGA Board. The sensors (light board. Light, humidity, and temperature) attaching sensors are attached to the board, and the processprocessed values come are shown on graphics graphical display. Finally, the robots can communicating to communicate with each other with the PmodRF2 using Digilent Pmod RF2 IEEE 802.15 RF-Transceiver: transceivers. Fig. 1 showed shows the scheme design of the robot.

Comment [A1]: Prepositional phrases should be set off from the main clause using a comma.

Comment [A2]: Some adjectives stand for a group or people who share the same characteristic so they function as nouns. In such cases, "the" is placed before such words and a plural verb is used.

Comment [A3]: An abbreviation needs to be spelled out once in the document and used consistently thereafter.

The project consisting incomprises two majormain components—the robot, and a cell phone.

Between a app. The robot and the cell phone communications is gotten communicate using

Bluetooth module's. The software implement was is done through implemented in the Verilog hardware description language and java (android the Java (Android SDK) program) programming language. The PmodOLED's controller code were for controlling the Digilent Pmod OLED screen is written on the C programming language and runs in the on a Microchip Technology PIC18F45K20 micro-controller microcontroller.

Comment [A4]: Formal language is a hallmark of academic English. One way to ensure conciseness in expression is converting phrasal verbs to formal words.

Comment [A5]: To use the colon correctly, you must make sure that sentence that comes before the colon is a complete, grammatical sentence.

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Robot The robot is equipped with a Nexys3 Nexys 3 FPGA Board with XILINX SPARTAN board based on a Xilinx Spartan-6 FPGA, which controls athe attached peripheral devices. It has atwo analog sensor: a light "sensor" (photo-resistor) and a humidity sensor (Samyoung SYH-2R). PmodAD1 converted). A Digilent Pmod AD1 converts the analog signal's signals into digital value's and than values for processing by the FPGA can process the. The temperature is measured values. A by a Maxim Integrated DS18S20 digital thermometer measuring the temperature. It has a, which is accurate to within 0.5C accuracy5°C between -10-°C toand +85°C. The FPGA broad board collects the measured values and; then evaluates these. Using a them. The robot uses a Nuvoton ISD1760 voice recording and playback device the robotto play back template voices accordingly to the measureingvoice templates based on the measured values. A PIC18F45K20 micro-controllerThe microcontroller communicates with the FPGA board and handle PmodOLED handles the display, which displaying evaluated shows the measured humidity, and light level information. What is more it include an It also includes a Rayson BTM: 222 Bluetooth module. It can communicates using, enabling it to communicate with a cell phone (running the Android operating system). Based on the phone their is a android operation system) and according on a received information received from the cell phone, it instructs the FPGA will be handles the movements of to activate the motors accordingly.

Comment [A6]: A minus sign (-) instead of a hyphen (-) can should be used to indicate negative values.