

Introduction to ExpEYES Junior

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



Learning Objectives

We will learn,



Learning Objectives

We will learn,

- **About ExpEYES Junior device**



Learning Objectives

We will learn,

- About **ExpEYES Junior** device
- **Features**



Learning Objectives

We will learn,

- About **ExpEYES Junior** device
- Features
- Buy the device



Learning Objectives

We will learn,

- About **ExpEYES Junior** device
- Features
- Buy the device
- Installation of the software on different operating systems



Learning Objectives



Learning Objectives

We will also learn to,



Learning Objectives

We will also learn to,

- **Connect the device to the system**



Learning Objectives

We will also learn to,

- Connect the device to the system
- **Demonstrate a simple experiment**



System Requirement



System Requirement

- **ExpEYES v 3.1.0**



System Requirement

- **ExpEYES v 3.1.0**
- **Ubuntu Linux OS v 14.04**



System Requirement

- **ExpEYES v 3.1.0**
- **Ubuntu Linux OS v 14.04**
- **Andriod v 5.0.2**



System Requirement

- **ExpEYES v 3.1.0**
- **Ubuntu Linux OS v 14.04**
- **Andriod v 5.0.2**
- **Windows v 7**



System Requirement

- **ExpEYES v 3.1.0**
- **Ubuntu Linux OS v 14.04**
- **Andriod v 5.0.2**
- **Windows v 7**
- **Firefox browser v 35.0.1**



Pre-requisites



Pre-requisites

- **Knowledge of basic high school Physics**



What is ExpEYES?



What is ExpEYES?

- **ExpEYES** stands for Experiments for Young Engineers and Scientists



What is ExpEYES?

- **ExpEYES** stands for Experiments for Young Engineers and Scientists
- **Perform basic Physics & Electronics experiments**



ExpEYES Junior



ExpEYES Junior



ExpEYES Junior



- Small compact rectangular box with dimensions $8.6 \times 5.8 \times 1.6 \text{ cm}^3$



ExpEYES Junior



- Small compact rectangular box with dimensions $8.6 \times 5.8 \times 1.6 \text{ cm}^3$
- Weighs around 60g



Features



Features

- **Measure voltages, generates plots and waveforms**



Features

- **Measure voltages, generates plots and waveforms**
- **Low cost and gives accurate measurements**



Features

- Measure voltages, generates plots and waveforms
- Low cost and gives accurate measurements
- Built-in Signal Generator and Oscilloscope



Features



Features

- 12 bit input/output analog resolution



Features

- 12 bit input/output analog resolution
- Microsecond timing resolution



Features

- 12 bit input/output analog resolution
- Microsecond timing resolution
- **Software is available on Bootable ISO image**



Software Availability



Software Availability

- Software of **ExpEYES Junior** is coded in Python



Software Availability

- Software of **ExpEYES Junior** is coded in Python
- Free and open source



Software Availability

- Software of **ExpEYES Junior** is coded in Python
- Free and open source
- **Distributed under** GNU General Public License



Software



Software

Software works on



Software

Software works on

- **GNU/Linux**



Software

Software works on

- GNU/Linux
- Netbook



Software

Software works on

- GNU/Linux
- Netbook
- **Android**



Software

Software works on

- GNU/Linux
- Netbook
- Android
- Windows



Installation

Ubuntu Linux OS



NetBook



Installation

Android



Installation on Android

Note:

**Ensure wifi or data pack is available
on Android device**



Installation

Windows OS



Installation on Windows 8/8.1

Note:

**Enable unsigned driver installation
in settings**



Summary I

We have learnt,

- About **ExpEYES Junior** device
- Features
- Buy the device



Summary II

- **Install the software on Linux, Netbook, Android & Windows**
- **Connect the device to the system**
- **Demonstrate a simple experiment**



Assignment

As an assignment,

- **Install the software based on your Operating System**



Design and Development

- **ExpEYES** is designed and developed by **PHOENIX** project of Inter-University Accelerator Centre, New Delhi



About the Spoken Tutorial Project

- Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- It summarises the Spoken Tutorial project



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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to contact@spoken-tutorial.org



Acknowledgements

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- More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>

