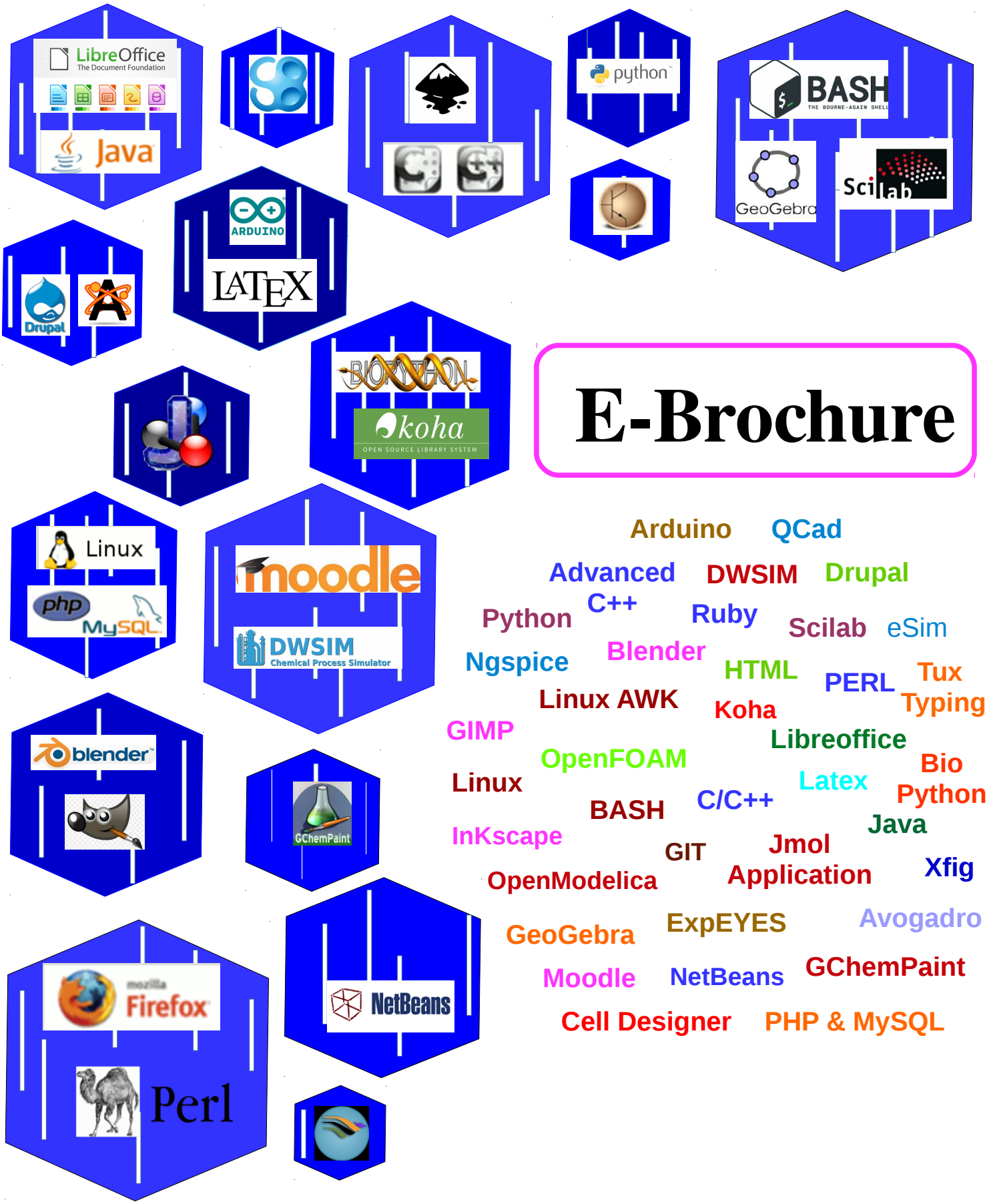
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Spoken Tutorial

IIT Bombay



E-Brochure

Arduino QCad

Advanced DWSIM Drupal

C++

Python Ruby Scilab eSim

Ngspice Blender HTML PERL Tux

Linux AWK Koha Typing

GIMP Libreoffice

OpenFOAM Bio

Linux Latex Python

BASH C/C++ Java

InKscape GIT Jmol

OpenModelica Application Xfig

GeoGebra ExpEYES Avogadro

Moodle NetBeans GChemPaint

Cell Designer PHP & MySQL

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Basic Computer Skills & Office Automation	
Software / FOSS name	**Applications / Skills & Employability**
Introduction to Computers	How to use computers for day-today activities.
LibreOffice – Writer, Calc, Impress, Base, Draw, Math	Office Automation system – Documentation, Spreadsheet, Slide making.
Linux, Linux AWK, Ubuntu, BOSS	Free and Open source operating system. Actively being taken up by E-Governance programs and SMEs.
Firefox	Web browser. Used for all internet browsing purposes.
Tux Typing	Teaches 10 Finger typing.

Programming Languages / Information Technology	
C / C++, Advance C++, Java, Java Business Application, Netbeans	**C** is the most popular language worldwide. **Java** is also popular with ability to run the same program on different systems relevant to World Wide Web *software*. **NetBeans** is an open-source integrated development environment (**IDE**). Smooth JavaScript editor, Templates profiler & GUI Design tool. **JBA** is used to create business applications and provide domain expertise.
Ruby	Ruby is an object oriented scripting language use widely for developing web applications.
GIT	GIT is a version-control system for tracking changes in computer files and coordinating work on those files among multiple people.
Android App using Kotlin	Learn to architect and develop Android apps in the Kotlin programming language. With these techniques you'll create apps in less time, writing less code, and with fewer errors.
HTML	Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser.

Modelling and Simulation	
DWSIM	DWSIM is a software for modeling, simulation, and optimization of steady-state chemical processes, Use in Chemical industry.
OpenModelica	OpenModelica is used for Simulating, Optimising, Analysing complex dynamic systems. Eg. In power plant, water treatment, automotive processes optimization.

Mathematics / Statistics	
GeoGebra	Dynamic Mathematics Software (DMS) for teaching and learning mathematics from middle school through college level.
R (like SPSS)	Programming language used for statistical computing and graphics.
Biopython	Tool for Computational Biology and Bioinformatics.

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Multimedia / Drawing	
GIMP (like Photoshop)	GIMP is a graphics editor used for image retouching and editing, free-form drawing etc.
Inkscape (like Corel Draw)	Inkscape designs and creates a wide variety of graphics such as illustrations, icons, logos, diagrams, maps and web graphics.
Blender (like Maya 3D)	Blender is a 3D computer graphics software toolset used for creating animated films, visual effects, art, 3D printed models, games.
QCad	QCAD is used to create technical drawings such as plans for buildings, interiors, mechanical parts or schematics and diagrams.
Synfig	Synfig Studio eliminates the need to create animation frame-by frame, allowing you to produce 2D animation of a higher quality with fewer people and resources.

Scripting Languages / Web Development	
Python	Used for web programming eg. Django, Zope, Google App Engine, Desktop applications, Web Developement sites eg. Facebook, Google search, Wikipedia.
PERL	Perl is a general-purpose programming language useful as a Glue language for tying together systems – hence invaluable to System Administrators and for Web Development.
PHP & MySQL	Used as Web development and Database Management Systems package.
Drupal	Drupal is a content management system (CMS) written in PHP and distributed under the GNU General Public License. Useful for website-building and web applications.

Mechanical / Civil / Electrical – Engineering disciplines	
Open Foam	Data processing and visualisation. Aerodynamics, Building constructions.
Oscad (eSim)	Tool for circuit design, simulation,analysis and PCB design.
QGIS	QGIS is an application that supports viewing, editing, and analysis of geospatial data. It allows users to analyse and edit spatial information, in addition to composing and exporting graphical maps.

Chemistry / Bio-Chemistry	
Avogadro	Avogadro is a molecule editor and visualizer.
GChemPaint	GChemPaint allows you to draw and display 2D chemical structures. Very useful to teach and learn abstract chemistry concepts.
Cell Designer	Cell designer is a drawing tool – a structured diagram editor for biochemical networks & gene-regulatory drawings.
Jmol Application	It is used for molecular modelling chemical structures in 3 dimensions. eg. In molecular biology pertinent structures.

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Electronics / Physics	
Arduino	Arduino is an open source platform used for building electronics projects. Or creating interactive objects or environments. eg. Used in Robotics
Ngspice	It is a program used in integrated circuit and board-level design to check the integrity of circuit designs and to predict circuit behavior.
ExpEYES	ExpEYES stands for Experiments for Young Engineers and Scientists. A tool for learning science by exploring and experimenting.
Single Board Heater System(SBHS)	The application of this device is in the Control Systems area of Engineering.

Learning Management System	
Moodle	Moodle is a learning management system or an online platform for customized learning, assignment and assessment purposes.
LaTeX	The best tool for Technical writing. eg. Math typesetting for Science, Engineering, Technology writing of theses, projects, journal articles, books etc. LaTeX has automatic generation of high quality PDF reports.
Scilab (like MATLAB)	Scientific computation package for Advanced mathematical computations. Use for academics in Physics, Engineering, Applied mathematics, Statistics & in Data Analytics companies and departments.

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