



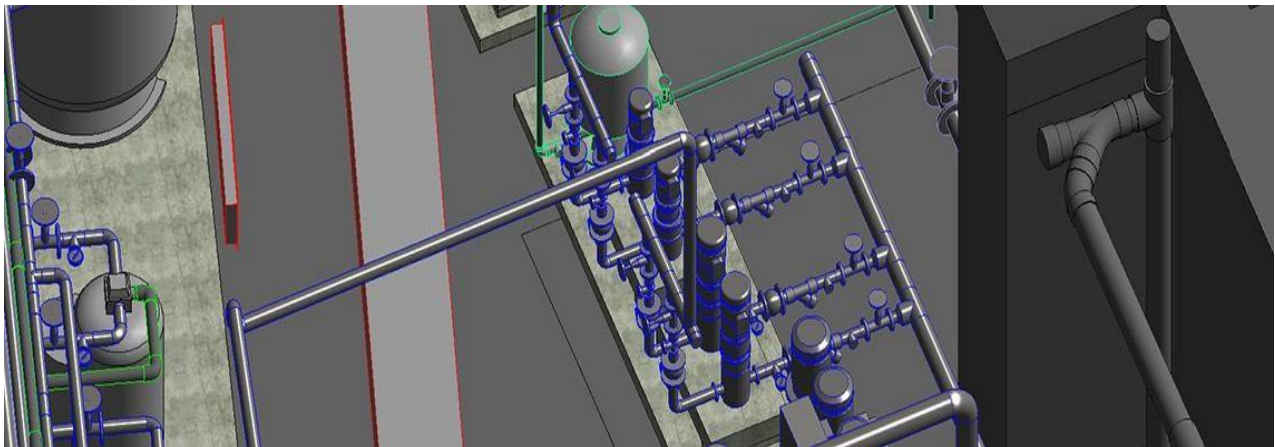
BELL INSTITUTE OF TECHNOLOGY

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AUTODESK REVIT MEP TRAINING BRIEF COURSE OUTLINE

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Autodesk **Revit MEP** is a building information modeling (**BIM**) software created by Autodesk for professionals who engage in **MEP** engineering. **MEP** stands for mechanical, electrical, and plumbing, which are the three engineering disciplines that **Revit MEP** addresses.

Duration: 3 weeks at 2 hrs per day or 1 ½ week at 4 hrs per day (30 Hours Contact Time)

Cost: At the Training Centre: 10,000/= with Ksh 500/= one time Reg Fee

This cost includes:

1. Certificates upon course completion
2. Training Manuals

3. Training workbook Exercises
4. Registration Fee

Training is vital for the effective use of any software. Properly trained users will have increased productivity and will gain greater confidence with the software. It is a worthwhile investment to train new users to overcome their initial hesitancy and existing users to increase their depth of knowledge.

Our AutoDESK REVIT MEP course has been designed by experts for anyone new to AUTODESK REVIT MEP. No matter what background you are coming from AUTODESK REVIT MEP Training gives you the confidence to work on projects immediately upon your return to the office.

Part 1 - Topics that are common to HVAC, Piping, Fire Protection , and Electrical engineers:

- Starting the Implementation Project
- Sites
- Tracking Site Coverage and Developing Concepts
- Families
- Columns, Beams, and Foundations
- Walls
- Slabs, Floors, Ramps, Ceilings, and Roofs
- Rooms and Areas
- Rendering

Part 2 - Topics that are specifics to HVAC, Piping, and FP engineers and Electrical.

- Energy Analysis
- HVAC Systems
- Hydronic Piping Systems
- Plumbing Systems
- Fire Protection
- Fabrication
- Electrical Systems

NOTE: You may not need to cover all Areas but concentrate on your professional Field of Practice after Part 1.

<p>SESSION, Each session has Max of 2 hours to complete and do the prevailing exercises.</p>	<p>Building Information Modeling</p> <ul style="list-style-type: none"> • Building Information Modeling for MEP Engineering • Introducing Revit as a BIM tool <p>UI Tour, Project Navigation and View Creation</p> <ul style="list-style-type: none"> • Exploring the User Interface • Placement & Properties of Grids, Levels & Dimensions • Working with Revit Elements and Families • Managing Views • Controlling Object Visibility • Working with Section and Elevation Views • Creating and Modifying 3D Views
<p>SESSION 1</p>	<p>Element Selection & Manipulation</p>

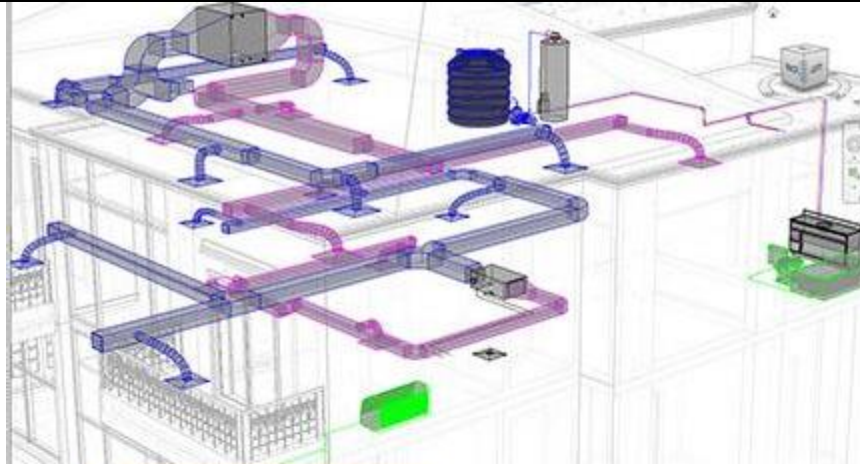
	<p>Element Properties & Manipulation</p> <ul style="list-style-type: none"> • Instance & Type Parameters • Modify tools, Nodes & Snaps Visibility Control & Categorisation • Project Wide Settings • View Specific Overrides • Element Specific Overrides • Individual Line Overrides
SESSION 2	<p>Establishing a Project</p> <ul style="list-style-type: none"> • Project Units – Common, HVAC, Electrical & Piping • MEP settings, Symbols & Schematic Design • Project Commencement & Collaboration • Linking CAD & Revit Architecture • Coordination Review
SESSION 3	<p>Introduction to Building Elements</p> <ul style="list-style-type: none"> • Basic Wall definitions, floors, roofs & ceilings • Sketching Rules and relating slabs to walls & supports • Slabs slopes, Roof design and Ceiling definitions • System Family editing
SESSION 4	<p>Equipment, Fixtures & Fittings</p> <ul style="list-style-type: none"> • Family Terminology • Component Placement • Selecting the correct Level • MEP Workflow
SESSION 5	<p>Introducing Systems</p> <ul style="list-style-type: none"> • Setting up a Project Profile • System Browser • Main Systems - Mechanical - Electrical - Plumbing
SESSION 6	<p>Basic Schedules and Legends</p> <ul style="list-style-type: none"> • Scheduling Components • Style Schedules • Legends
SESSION 7	<p>Mechanical Systems and HVAC Systems</p> <ul style="list-style-type: none"> • Mechanical Settings • Duct Types & fittings • Creating duct & Piping systems • Insulating & lining ductwork • Plant & equipment • Mechanical Pipework, flanges and fittings • Checking and Fixing Interference Conditions • About HVAC Systems • Mechanical Settings • Adding Air Terminals and Mechanical Equipment

	<ul style="list-style-type: none"> • Air Terminals • Mechanical Equipment • Adding Ductwork • Adding Ducts • Modifying Ducts • Changing Ducts using Standard Tools • Converting Ducts and Duct Types • Adding Insulation and Lining • Modifying the Justification • Working with Fittings • Creating Duct Systems • Automatic Ductwork Layouts • Automatic Ductwork
SESSION 9	<p>Electrical Systems & Circuits</p> <ul style="list-style-type: none"> • Equipment, devices & fixtures • Wiring, cable tray and conduit modelling • Circuits and Switch Systems <p>Placing Electrical Components</p> <ul style="list-style-type: none"> • Electrical Equipment • Electrical Devices • Lighting Fixtures • Creating Electrical Circuits • Creating Power Circuits • Create a Switch System • Create Other Circuits • Cable Trays and Conduit • Creating Parallel Conduit Runs • Modifying Cable Tray and Conduit • Adding Fittings • Electrical Panel Schedules • Create Panel Schedules • Modifying Panel Schedules
SESSION 10	<p>Plumbing Systems</p> <ul style="list-style-type: none"> • Plumbing settings • Plumbing fixtures • Creating plumbing systems • Creating sanitary systems • Domestic hot & cold water systems • System browser <p>Modifying Views for Plumbing</p> <ul style="list-style-type: none"> • Adding Plumbing Fixtures • Reference Planes • Drawing Piping for Plumbing Systems • Modifying Plumbing Pipes • Plumbing Pipe Fittings and Accessories • Working with Plumbing Systems • Automatic Layouts • Plumbing Schedules

SESSION 11	<p>ENERGY ANALYSIS</p> <ul style="list-style-type: none"> • Preparing a Project for Energy Analysis • Making Sure Project Location and True North are Set Properly • Sun Settings • Previewing Solar Study • Energy Settings • Building Construction Type Settings • Building/Space Type Settings (Manage > MEP Settings) • Assigning Zones Properties • Assigning Spaces Properties • Heating and Cooling Loads - General • Heating and Cooling Loads - Details • Analytical Surfaces • Analyzing the Heating and Cooling Loads
SESSION 12	<p>2D Drafting & Annotation</p> <ul style="list-style-type: none"> • Introducing Annotation tools and component categories • Detail component libraries • Repeating Details • Lines & arcs • Text, Tags & Keynotes
SESSION 13	<p>Construction Documents</p> <ul style="list-style-type: none"> • Setting Up Sheets • Sheet (Title Block) Properties • Placing and Modifying Views on Sheets • Modifying Views on Sheets • Working Inside Views • Adding Revisions • Printing Sheets • Printing Options
SESSION 14	<p>PROJECT ON Area of students work Interest (Mechanical, Electrical or Plumbing)</p>

SOME REVIT DESIGNS YOU WOULD BE ABLE TO PERFORM

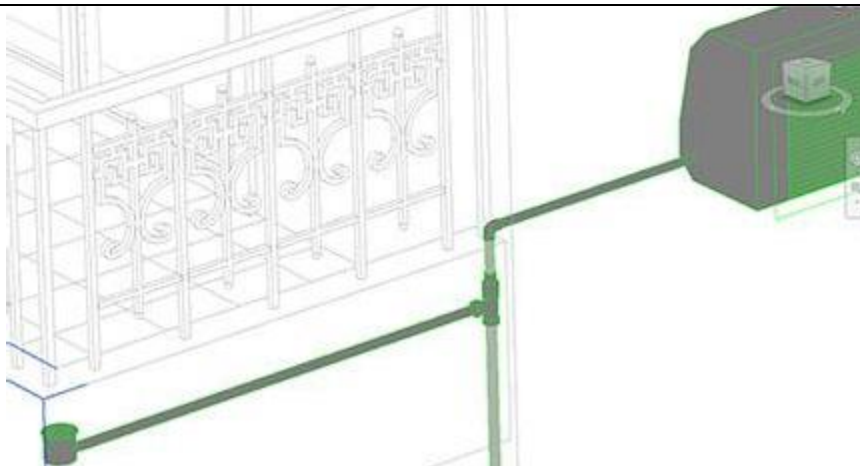
DUCT SYSTEM



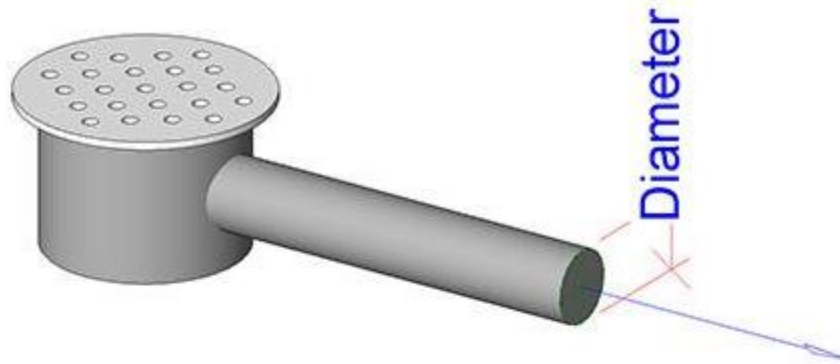
PREPARING THE ARCHITECTURAL MODEL FOR YOUR FIRST PIPING SYSTEM



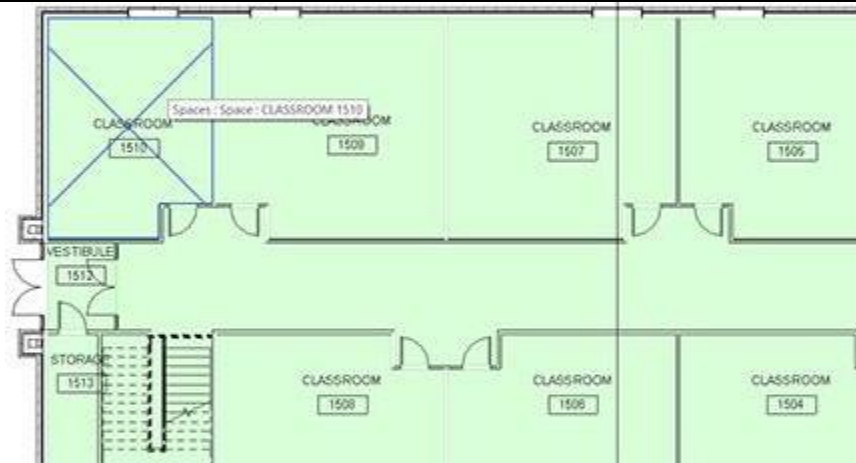
PIPING SYSTEM



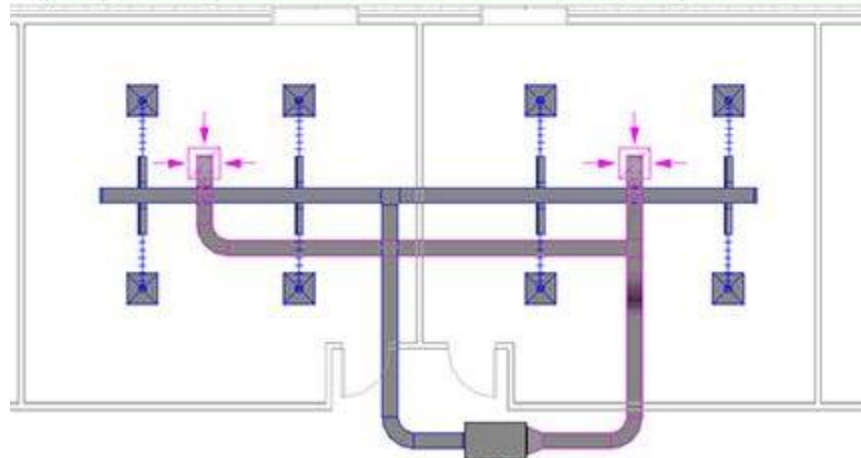
MEP FAMILIES



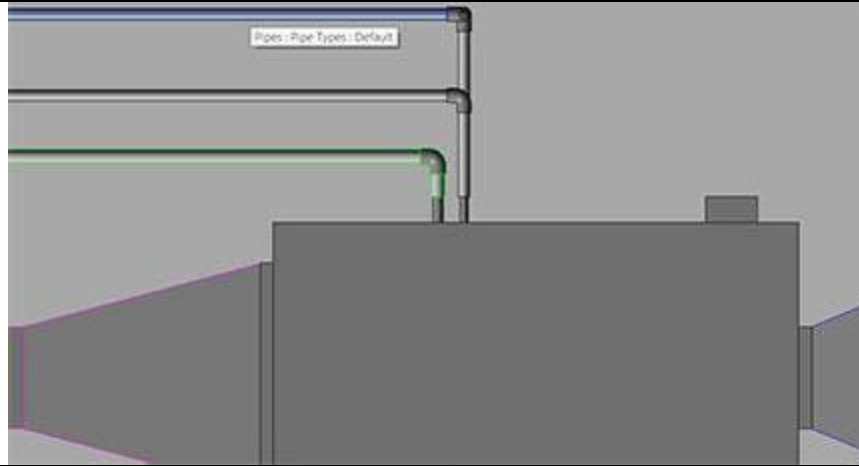
SPACES AND ZONES



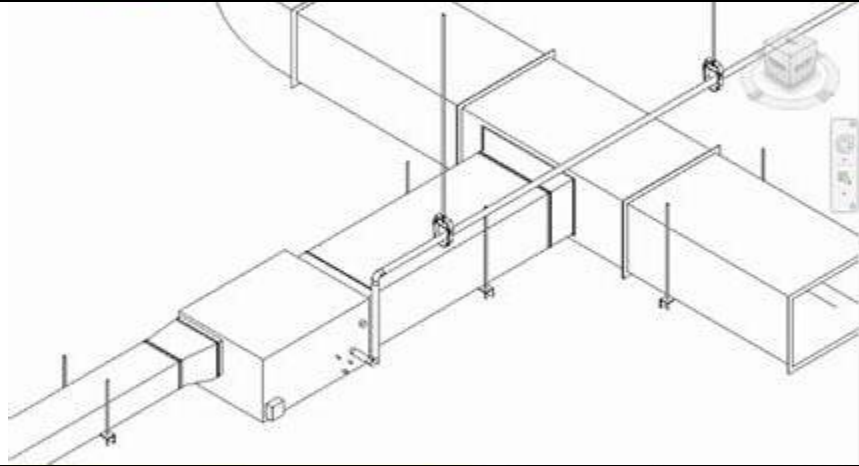
HVAC SYSTEMS



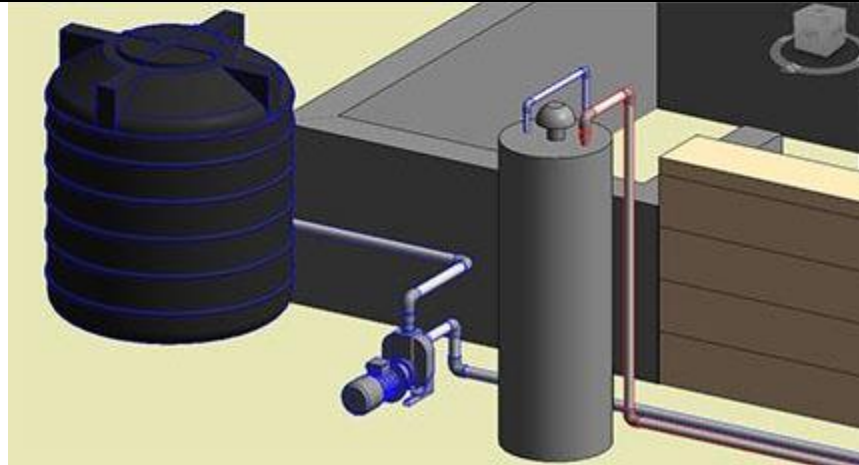
HYDRONIC PIPING SYSTEMS



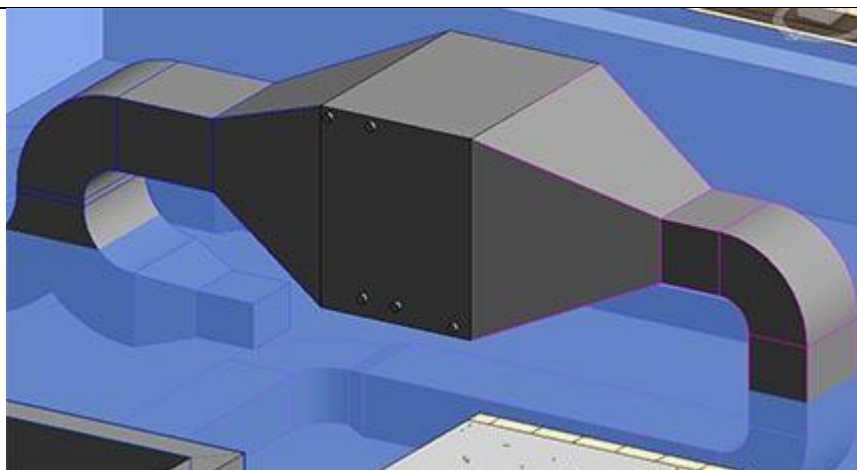
FABRICATION

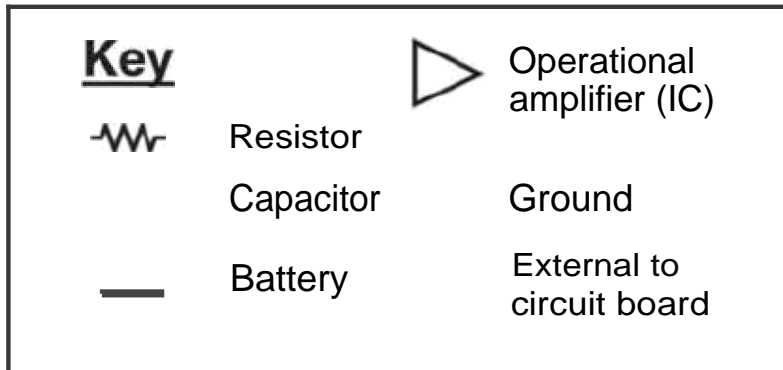
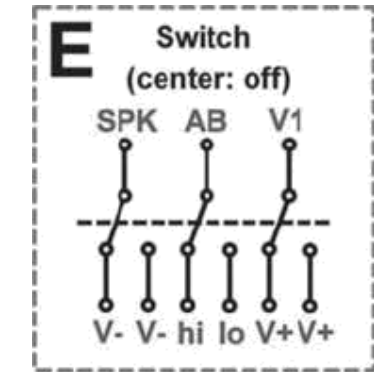
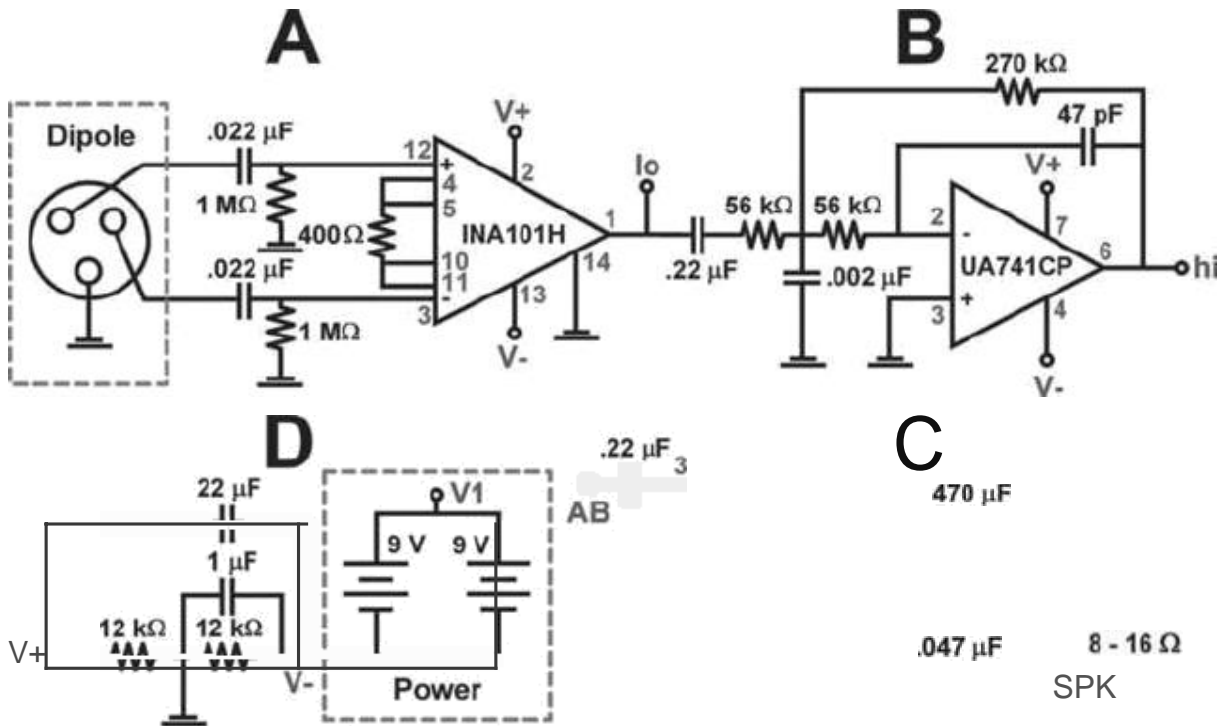


PLUMBING SYSTEMS



OUTDOOR SYSTEMS



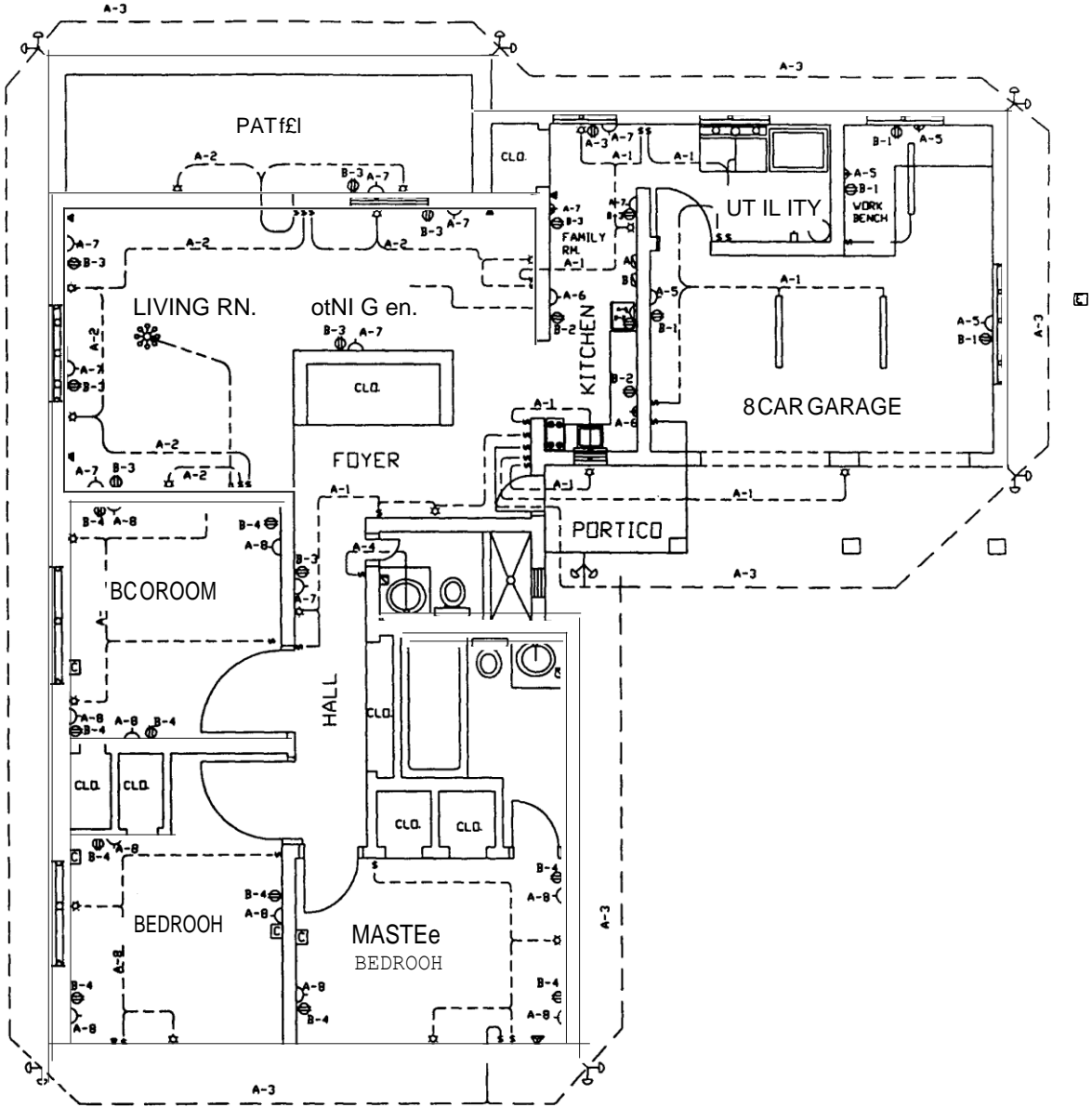


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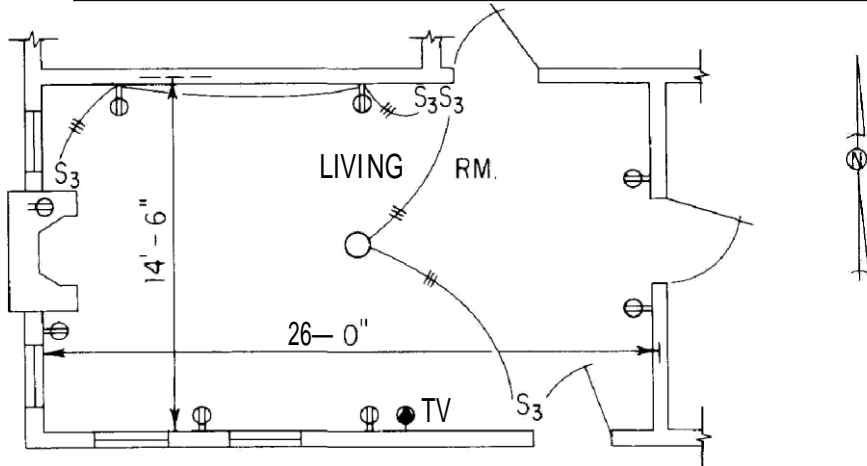
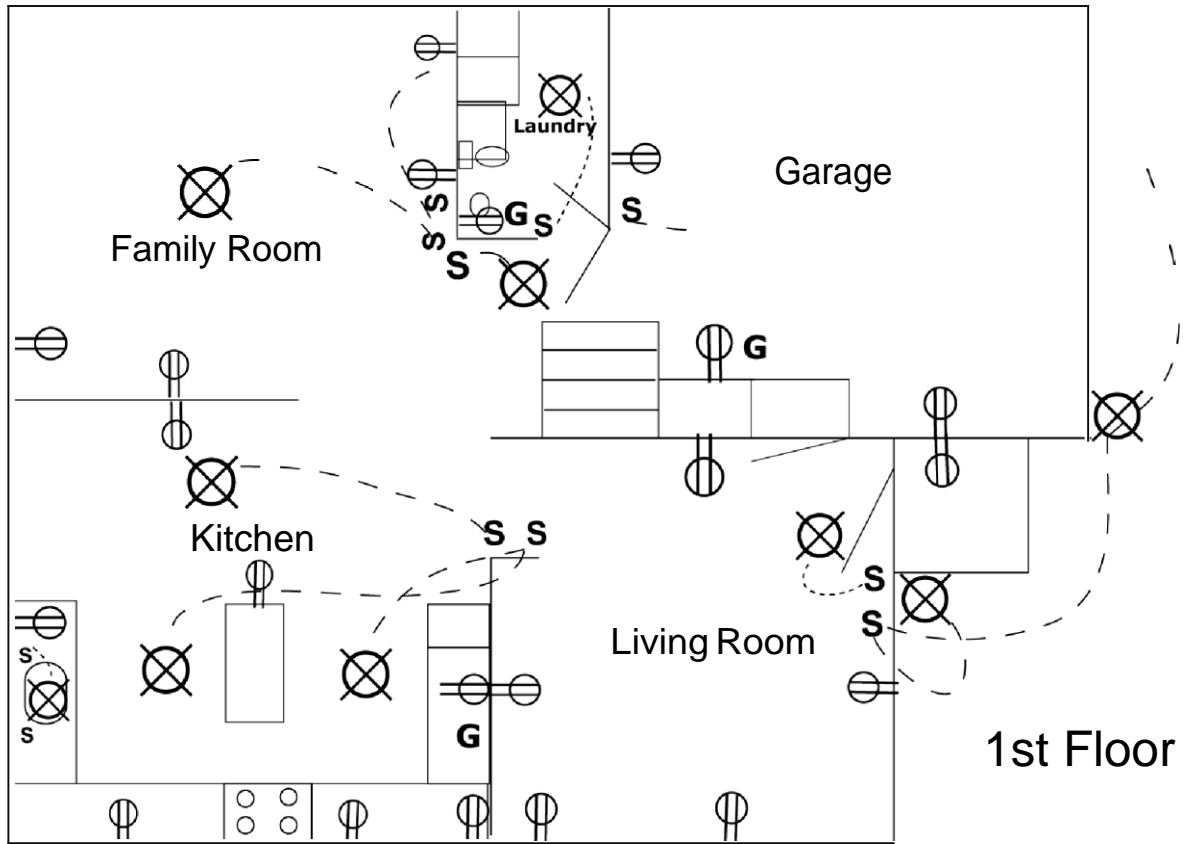
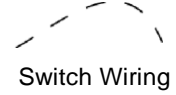
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SPK



Floor Plan Example

Symbols



WIRING CONCEALED IN CEILING OR WALL

THREE WIRES

WIRING CONCEALED IN FLOOR

FOUR TIRES

TWO BRANCH CIRCUITS

WIRING TURNED UP

