In[4]:=
```
DynamicModule[
 {eqn = "", vars = "x", sol = "", orderInfo = "",
  useReduce = False, solveType = "Symbolic",
  showSteps = False, plotToggle = False},

 (* Helper function to detect order of equation(s) *)
 getEquationOrder[e_List, v_List] := Module[{orders},
  orders = Table[
   Which[
    PolynomialQ[e[[i]], v],
     "Polynomial Order: " <>
     ToString[Exponent[e[[i]], v]],
    True,
     "Non-polynomial or mixed equation"
   ],
   {i, Length[e]}
  ];
  StringJoin@
   Riffle[
    Table["Eq" <> ToString[i] <> ": " <> orders[[i]], {i, Length[orders]}],
    "\n"
   ]
 ];

 Column[{
  Style["📐 Aashish Tharu Gamuwa Ultimate Equation Solver", Bold, 16, Blue],
    Style["Department of Sciences Quantum University Roorkee, Uttarakhand, India",
     Bold, 16, Blue],

  Row[{
   "Equation(s): ",
   InputField[Dynamic[eqn], String,
    FieldHint → "e.g. x^2 + y == 1, x - y == 0", ImageSize → 400]
  }],

  Row[{
   "Variable(s) to solve for: ",
   InputField[Dynamic[vars], String,
    FieldHint → "e.g. x or {x, y}", ImageSize → 200]
  }],
```

```
Row[{
 Checkbox[Dynamic[useReduce]], " Use Reduce",
 Spacer[20],
 PopupMenu[Dynamic[solveType], {"Symbolic", "Numeric"}],
 Spacer[20],
 Checkbox[Dynamic[showSteps]], " Show Steps (symbolic only)",
 Spacer[20],
 Checkbox[Dynamic[plotToggle]], " Plot (1-var only)"
}],

Row[{
 Button["Solve",
  sol = Quiet@Check[
   Module[{parsedEqn, parsedVars},
    parsedEqn = ToExpression["{" <> eqn <> "}"];
    parsedVars = ToExpression[vars];

    (* Get and display equation order *)
    orderInfo = getEquationOrder[
     (Subtract @@@ parsedEqn), Flatten[{parsedVars}]
    ];

    (* Solve logic *)
    If[solveType === "Symbolic",
     If[useReduce,
      ToString[Reduce[parsedEqn, parsedVars]],
      If[showSteps && VectorQ[parsedVars, AtomQ] && Length[parsedVars] == 1,
       ToString[
        Column@{
         "Step-by-step simplification:",
         FullSimplify[parsedEqn[[1]] == parsedEqn[[2]]]
        }
       ],
       ToString[Solve[parsedEqn, parsedVars]]
      ]
     ],
     ToString[N[Solve[parsedEqn, parsedVars]]]
    ]
   ],
```

```
   "✕ Error: Invalid input or unrecognized format"
  ],
  Method → "Queued"
 ],

 Button["Clear",
  eqn = ""; vars = "x"; sol = ""; orderInfo = "";,
  Method → "Queued"
 ]
}],

Style["Equation Order:", Bold],
Panel@Dynamic[orderInfo],

Style["Result:", Bold],
Panel@Dynamic[sol],

Dynamic[
 If[plotToggle && solveType === "Symbolic",
  Module[{parsedEqn, parsedVars},
   parsedEqn = Quiet@Check[ToExpression["{" <> eqn <> "}"], $Failed];
   parsedVars = Quiet@Check[ToExpression[vars], $Failed];
   If[ListQ[parsedEqn] && Length[parsedEqn] == 1 && AtomQ[parsedVars],
    Plot[
     Evaluate[parsedEqn[[1]]],
     {parsedVars, -10, 10},
     PlotLabel → "Plot of equation",
     AxesLabel → {ToString[parsedVars], "Value"},
     PlotStyle → Blue
    ],
    ""
   ]
  ],
  ""
 ]
]
}]
]
```

## Aashish Tharu Gamuwa Ultimate Equation Solver

**Department of Sciences Quantum**

**University Roorkee, Uttarakhand, India**

Equation(s): e.g. x^2 + y == 1, x - y == 0

Variable(s) to solve for: x

Out[4]= Use Reduce | Symbolic | Show Steps (symbolic only) | Plot (1-var only)

Solve | Clear

**Equation Order:**

**Result:**