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INTELLIGENT LEGAL ANALYSIS TOOL

CONTRACT FORMATION ANALYSER

v 1.3

Automated logic-tree analysis of contract formation under English Common Law — built on the foundational case law from Carlill to Byrne v Van Tienhoven.

■ **Live Logic Tree**

§ **48 Legal Definitions**

✓ **Real-Time Verdict**

■ **Desktop App (Python)**

■ **Web App (HTML5)**

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“Contract formation is the cornerstone of commercial law. Every transaction begins here.”

— English Contract Law Principle

THE CHALLENGE

Determining whether a valid contract has been formed under English Common Law requires the systematic analysis of multiple interlocking legal elements: a valid offer, proper communication, unambiguous acceptance, and sufficient consideration.

Each element is governed by decades of case law — from the foundational principles of Carlill v Carbolic Smoke Ball Co [1893] to the modern applications in RTS Flexible Systems v Molkerei [2010] UKSC 14.

Legal practitioners, students, and commercial parties have historically relied on laborious manual checklists, expert consultation, or expensive legal review to reach a conclusion — a process that is slow, inconsistent, and prone to human error.

THE SOLUTION

The Contract Formation Analyser delivers an authoritative, real-time verdict on contract validity through an interactive logic tree that maps directly to established English law. Each input variable corresponds to a precise legal principle, accompanied by the leading case authority. The application processes forty-two individual inputs across five legal phases, applying the correct AND/OR/NOR gate logic to reach a definitive conclusion.

Available as both a professional desktop application and a zero-dependency web application, it brings the rigour of qualified legal analysis to every desk.

42	5	48	2	100%
Input Parameters	Legal Phases	Case Authorities	Platforms	English Common Law

WHO IT IS FOR

- **Legal Practitioners**
  Solicitors and barristers seeking rapid formation analysis for contract disputes.
- **Commercial Parties**
  Businesses needing immediate clarity on contractual validity before committing.
- **Law Students & Academics**
  Teaching and learning tool mapping case law to practical decision logic.
- **Legal Technologists**
  Benchmark reference for AI-assisted contract analysis systems.

THE FIVE-PHASE LEGAL FRAMEWORK

English Common Law · Offer → Communication → Acceptance → Consideration → Contract

PHASE 1 **OFFER** → PHASE 2 **COMMUNICATION** → PHASE 3 **ACCEPTANCE** → PHASE 4 **CONSIDERATION** → PHASE 5 **CONTRACT**

OFFER

- Certainty of terms (Scammell v Ouston [1941])
- Objective test (Smith v Hughes (1871))
- Intention to be legally bound (Carlill [1893])
- Not an invitation to treat (Boots [1953])
- No limiting conditions (Ramsgate Hotel (1866))

COMMUNICATION

- Receipt rule (Entores v Miles Far East [1955])
- Postal rule (Adams v Lindsell (1818))
- Instantaneous communication (Brinkibon [1983])
- Unilateral offer — no comm. needed (Carlill)
- Vending machine rule (Thornton [1971])

ACCEPTANCE

- Mirror image rule (Hyde v Wrench (1840))
- Battle of forms (Butler Machine Tool [1979])
- Acceptance within time (Ramsgate [1866])
- Communication to offeror (Felthouse (1862))
- Unilateral — performance sufficient (Carlill)

CONSIDERATION

- Benefit / detriment (Currie v Misa (1875))
- Sufficiency not adequacy (Chappell v Nestlé)
- Forbearance to sue (Callisher (1870))
- Practical benefit (Williams v Roffey [1991])
- No past consideration (Re McArdle [1951])

CONTRACT

- Formation complete: all phases satisfied
- Binding on both parties
- Enforceable at common law
- Subject to vitiating factors
- (separate analysis required)

The Contract Formation Analyser integrates seven years of English contract law case authorities into a single, elegant analytical instrument. Six core capabilities distinguish it from any existing legal analysis tool.

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INTERACTIVE LOGIC TREE

The centrepiece of the application: a live, colour-coded logic tree spanning five legal phases. Each node displays its current validity status — green for satisfied, crimson for failing. AND, OR and NOR gate badges show the precise logical operator governing each grouping, matching the structure of established case law. The tree redraws in real time on every checkbox change, providing

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48 HOVER LEGAL DEFINITIONS

Every single input variable carries a full legal definition accessible on hover — 48 authoritative definitions in total, drawn from the leading English cases. Each definition includes the full case citation, the key principle, and its application in the analytical context. From Scammell v Ouston [1941] on certainty of terms to Callisher v Bischoffsheim (1870) on forbearance to sue, the

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REAL-TIME VALIDITY VERDICT

A prominent result badge in the application header delivers an immediate, unambiguous verdict: VALID CONTRACT or NO VALID CONTRACT. The badge transitions in real time — green with a check mark on valid formation, crimson with a cross where any essential element fails. The verdict reflects the complete logic of all five phases simultaneously, updated on every single input

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DUAL-PLATFORM DELIVERY

The Analyser is delivered on two independent, fully-featured platforms. The Python desktop application (contract_analyser.py) requires no internet connection and runs on any system with Python 3.10+. The web application (index.html) is a single self-contained HTML5 file requiring no server, no framework, no installation. Both platforms implement identical logic, identical

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STRUCTURED INPUT ARCHITECTURE

Forty-two input parameters are organised into ten logical sections with clear gate-type labelling (AND / OR / NOR). NOR sections — where any ticked condition voids the phase — are clearly distinguished from AND and OR sections. Each checkbox carries a live dot indicator that turns green or crimson instantly. A Reset to Defaults function restores the standard scenario with a single click.

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PROFESSIONAL CORPORATE DESIGN

The application is designed to the standard of a Magic Circle law firm or Big-4 consulting publication. The colour palette — deep charcoal navy, platinum gold, four distinguished phase hues — is calibrated for professional presentations. Typography uses Playfair Display for headings and Crimson Pro for body text in the web application, with Georgia and Helvetica in the Python desktop application.

TWO PLATFORMS. ONE STANDARD.

The same authoritative analysis engine. The same corporate visual identity. Deployed on whichever platform best serves your workflow.

DESKTOP APPLICATION

contract_analyser.py

Python 3.10+ · macOS, Windows, Linux

A full-featured desktop application built on Python's Tkinter framework. Installs in seconds and runs offline, with no third-party dependencies beyond the Python standard library.

Runtime	Python 3.10 or later
Framework	Tkinter (built-in stdlib)
Launch	python3 contract_analyser.py
File size	~55 KB source
Connection	Fully offline

- Interactive canvas logic tree with live redraws
- Styled hover tooltips with case citations
- Smooth elbow-routed connector lines
- Reset to defaults in one click
- 48 individual legal definitions on demand

WEB APPLICATION

index.html

Any modern browser · No server required

A single self-contained HTML5 file. Open in any browser — Chrome, Firefox, Safari, Edge — with no installation, no framework, no backend. Double-click and it works.

Runtime	Any modern browser (HTML5)
Framework	Vanilla JS + SVG (no dependencies)
Launch	Open index.html in browser
File size	~57 KB single file
Connection	Works fully offline

- SVG logic tree with ResizeObserver auto-scaling
- Playfair Display + Crimson Pro typography
- CSS animated result badge
- Smart tooltip positioning (never off-screen)
- Identical logic engine to desktop app

Both files are delivered as a matched pair. They share an identical colour scheme, logic engine, and set of legal definitions — ensuring a consistent experience whether working offline on the desktop or presenting in a browser.

Every input parameter in the Contract Formation Analyser is grounded in a specific English case authority. The table below sets out the principal cases organising each of the five phases, together with the legal proposition for which each stands.

OFFER	CASE / AUTHORITY	PRINCIPLE
Scammell v Ouston [1941] AC 251	*Certainty of terms required for valid offer*	
Smith v Hughes (1871) LR 6 QB 597	*Objective test for offer formation*	
Harvey v Facey [1893] AC 552	*Supply of information ≠ offer*	
Carlill v Carbolic Smoke Ball [1893]	*Unilateral offers — binding on the world*	
Gibson v Manchester CC [1979] 1 WLR 294	*Completeness required; negotiation ≠ offer*	
Boots Cash Chemists [1953] 1 QB 401	*Shop display = invitation to treat, not offer*	
Partridge v Crittenden [1968]	*Advertisement = invitation to treat*	
Ramsgate Victoria Hotel (1866)	*Offer lapses after unreasonable time*	

COMMUNICATION	CASE / AUTHORITY	PRINCIPLE
Entores v Miles Far East [1955] 2 QB 327	*Receipt rule for instantaneous comm.*	
Brinkibon v Stahag Stahl [1983] 2 AC 34	*Telex/electronic — receipt rule applies*	
Adams v Lindsell (1818) 1 B&Ad 681	*Postal rule — acceptance on posting*	
Byrne v Van Tienhoven (1880) 5 CPD 344	*Revocation effective only on receipt*	
Dickinson v Dodds (1876) 2 ChD 463	*Revocation via reliable third party*	
Errington v Errington [1952] 1 KB 290	*Unilateral offer irrevocable on performance*	

ACCEPTANCE	CASE / AUTHORITY	PRINCIPLE
Hyde v Wrench (1840) 3 Beav 334	*Counter-offer destroys original offer*	
Butler Machine Tool v Ex-Cell-O [1979]	*Battle of forms — last shot prevails*	
Felthouse v Bindley (1862)	*Silence cannot constitute acceptance*	
Financings v Stimson [1962]	*Acceptance must meet conditions of offer*	

CONSIDERATION	CASE / AUTHORITY	PRINCIPLE
Currie v Misa (1875) LR 10 Ex 153	*Classic definition of good consideration*	
Chappell & Co v Nestlé [1960] AC 87	*Adequacy irrelevant; sufficiency required*	
Williams v Roffey Bros [1991] 1 QB 1	*Practical benefit as consideration*	
Callisher v Bischoffsheim (1870)	*Forbearance to sue = good consideration*	
Foakes v Beer (1884) 9 App Cas 605	*Part payment rule — no good consideration*	
Central London v High Trees [1947]	*Promissory estoppel as equitable relief*	

01 OPEN THE APPLICATION

Launch contract_analyser.py with Python 3 (python3 contract_analyser.py) or open index.html directly in any modern web browser. No installation, no dependencies, no configuration required.

02 REVIEW THE INPUT SECTIONS

The left panel contains ten input sections organised by legal phase. AND sections require all items to be ticked. OR sections require at least one. NOR sections (marked in crimson) must have all items unticked — any tick in a NOR section negates that phase.

03 HOVER FOR LEGAL DEFINITIONS

Hold the mouse over any checkbox label to reveal the hover tooltip — a styled panel containing the full legal definition, case citation, and the principle for which the case stands. Tooltips appear to the top-left of the cursor and never extend off-screen.

04 OBSERVE THE LIVE LOGIC TREE

The right panel displays the five-phase logic tree, updating in real time as you tick or untick boxes. Each main phase node shows VALID or INVALID. Sub-nodes show the intermediate logic groupings. Connector lines glow green when a phase is valid and fade to slate when failing.

05 READ THE VERDICT

The header displays a live result badge: ✓ VALID CONTRACT on successful formation across all five phases, or ✗ NO VALID CONTRACT where any essential element fails. The badge transitions instantly between states.

06 RESET AND ITERATE

Use the Reset to Defaults button to restore the standard baseline scenario. Experiment with alternative factual scenarios — toggle revocation, counter-offer, postal rule, unilateral offer conditions — and observe how the logic tree and verdict respond in real time.

QUICK REFERENCE

Python launch:	python3 contract_analyser.py
Web launch:	Open index.html in browser
Tooltip delay:	450ms hover delay — move cursor slowly
Gate logic:	AND = all must be true · OR = at least one · NOR = none may be true
Result:	Header badge updates on every change — green = valid, crimson = invalid

CLARITY. AUTHORITY. PRECISION.

Contract Formation Analysis for the Modern Practitioner

The Contract Formation Analyser v1.3 provides qualified, case-law-grounded analysis of the five essential elements of contract formation under English Common Law. It is designed for legal professionals, commercial practitioners, students, and technologists who require an authoritative, immediate, and reproducible analytical instrument.

PREPARED BY

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DELIVERABLES

contract_analyser.py · index.html