

# JDT Language Server Error IDs Reference

## Category Masks

Mask	Value	Description
TypeRelated	0x01000000	Type-related problems
FieldRelated	0x02000000	Field-related problems
MethodRelated	0x04000000	Method-related problems
ConstructorRelated	0x08000000	Constructor-related problems
ImportRelated	0x10000000	Import-related problems
Internal	0x20000000	Internal problems
Syntax	0x40000000	Syntax problems
Javadoc	0x80000000	Javadoc problems
ModuleRelated	0x00800000	Module-related problems (Java 9+)
Compliance	0x00400000	Compliance problems
PreviewRelated	0x00200000	Preview feature problems

## 1. Type-Related Errors

Error ID	Constant Name	Value	Description
16777217	ObjectHasNoSuperclass	TypeRelated + 1	Object has no superclass
16777218	UndefinedType	TypeRelated + 2	Type cannot be resolved
16777219	NotVisibleType	TypeRelated + 3	Type is not visible
16777220	AmbiguousType	TypeRelated + 4	Type is ambiguous
16777221	UsingDeprecatedType	TypeRelated + 5	Using deprecated type
16777222	InternalTypeNameProvided	TypeRelated + 6	Internal type name provided
553648135	UnusedPrivateType	Internal + TypeRelated + 7	Unused private type
16777231	IncompatibleTypesInEqualityOperator	TypeRelated + 15	Incompatible types in equality
16777232	IncompatibleTypesInConditionalOperator	TypeRelated + 16	Incompatible types in conditional
16777233	TypeMismatch	TypeRelated + 17	Type mismatch
553648146	IndirectAccessToStaticType	Internal + TypeRelated + 18	Indirect access to static type
16777235	ReturnTypeMismatch	TypeRelated + 19	Return type mismatch

## 2. Inner Types Problems

Error ID	Constant Name	Value	Description
16777236	MissingEnclosingInstanceForConstructorCall	TypeRelated + 20	Missing enclosing instance
16777237	MissingEnclosingInstance	TypeRelated + 21	Missing enclosing instance
16777238	IncorrectEnclosingInstanceReference	TypeRelated + 22	Incorrect enclosing instance
16777239	IllegalEnclosingInstanceSpecification	TypeRelated + 23	Illegal enclosing instance
536870936	CannotDefineStaticInitializerInLocalType	Internal + 24	Cannot define static initializer
536870937	OuterLocalMustBeFinal	Internal + 25	Outer local must be final
536870938	CannotDefineInterfaceInLocalType	Internal + 26	Cannot define interface in local
16777243	IllegalPrimitiveOrArrayTypeForEnclosingInstance	TypeRelated + 27	Illegal primitive/array type
536870940	EnclosingInstanceInConstructorCall	Internal + 28	Enclosing instance in constructor
16777245	AnonymousClassCannotExtendFinalClass	TypeRelated + 29	Anonymous class extends final
536870942	CannotDefineAnnotationInLocalType	Internal + 30	Cannot define annotation locally
536870943	CannotDefineEnumInLocalType	Internal + 31	Cannot define enum locally
536870944	NonStaticContextForEnumMemberType	Internal + 32	Non-static context for enum
16777249	TypeHidingType	TypeRelated + 33	Type hiding type
16777250	NotAnnotationType	TypeRelated + 34	Not an annotation type

### 3. Variable Errors

Error ID	Constant Name	Value	Description
570425394	UndefinedName	Internal + FieldRelated + 50	Undefined name
536870963	UninitializedLocalVariable	Internal + 51	Uninitialized local variable
536870964	VariableTypeCannotBeVoid	Internal + 52	Variable cannot be void
536870966	CannotAllocateVoidArray	Internal + 54	Cannot allocate void array
536870967	RedefinedLocal	Internal + 55	Redefined local variable
536870968	RedefinedArgument	Internal + 56	Redefined argument
536870969	DuplicateFinalLocalInitialization	Internal + 57	Duplicate final local init
536870970	NonBlankFinalLocalAssignment	Internal + 58	Non-blank final assignment
536870971	ParameterAssignment	Internal + 59	Parameter assignment
536870972	FinalOuterLocalAssignment	Internal + 60	Final outer local assignment
536870973	LocalVariableIsNeverUsed	Internal + 61	Local variable never used
536870974	ArgumentIsNeverUsed	Internal + 62	Argument never used

## 4. Field Errors

Error ID	Constant Name	Value	Description
33554502	UndefinedField	FieldRelated + 70	Undefined field
33554503	NotVisibleField	FieldRelated + 71	Field not visible
33554504	AmbiguousField	FieldRelated + 72	Ambiguous field
33554505	UsingDeprecatedField	FieldRelated + 73	Using deprecated field
33554506	NonStaticFieldFromStaticInvocation	FieldRelated + 74	Non-static field from static
570425419	ReferenceToForwardField	FieldRelated + Internal + 75	Reference to forward field
570425420	NonStaticAccessToStaticField	Internal + FieldRelated + 76	Non-static access to static
570425421	UnusedPrivateField	Internal + FieldRelated + 77	Unused private field
570425422	IndirectAccessToStaticField	Internal + FieldRelated + 78	Indirect access to static
570425423	UnqualifiedFieldAccess	Internal + FieldRelated + 79	Unqualified field access
33554512	FinalFieldAssignment	FieldRelated + 80	Final field assignment
33554513	UninitializedBlankFinalField	FieldRelated + 81	Uninitialized blank final
33554514	DuplicateBlankFinalFieldInitialization	FieldRelated + 82	Duplicate blank final init
33554515	UnresolvedVariable	FieldRelated + 83	Unresolved variable

## 5. Method Errors

Error ID	Constant Name	Value	Description
67108964	UndefinedMethod	MethodRelated + 100	Cannot find method
67108965	NotVisibleMethod	MethodRelated + 101	Method not visible
67108966	AmbiguousMethod	MethodRelated + 102	Ambiguous method
67108967	UsingDeprecatedMethod	MethodRelated + 103	Using deprecated method
67108968	DirectInvocationOfAbstractMethod	MethodRelated + 104	Direct invocation of abstract
67108969	VoidMethodReturnsValue	MethodRelated + 105	Void method returns value
67108970	MethodReturnsVoid	MethodRelated + 106	Method returns void
603979883	MethodRequiresBody	Internal + MethodRelated + 107	Method requires body
603979884	ShouldReturnValue	Internal + MethodRelated + 108	Should return value
67108974	MethodButWithConstructorName	MethodRelated + 110	Method with constructor name
16777327	MissingReturnType	TypeRelated + 111	Missing return type
603979888	BodyForNativeMethod	Internal + MethodRelated + 112	Body for native method
603979889	BodyForAbstractMethod	Internal + MethodRelated + 113	Body for abstract method
67108978	NoMessageSendOnBaseType	MethodRelated + 114	No message send on base type
67108979	ParameterMismatch	MethodRelated + 115	Parameter mismatch
67108980	NoMessageSendOnArrayType	MethodRelated + 116	No message send on array
603979893	NonStaticAccessToStaticMethod	Internal + MethodRelated + 117	Non-static access to static
603979894	UnusedPrivateMethod	Internal + MethodRelated + 118	Unused private method
603979895	IndirectAccessToStaticMethod	Internal + MethodRelated + 119	Indirect access to static
67108984	MissingTypeInMethod	MethodRelated + 120	Missing type in method
603979897	MethodCanBeStatic	Internal + MethodRelated + 121	Method can be static
603979898	MethodCanBePotentiallyStatic	Internal + MethodRelated + 122	Method can potentially be static

## 6. Constructor Errors

Error ID	Constant Name	Value	Description
134217857	MissingTypeInConstructor	ConstructorRelated + 129	Missing type in constructor
134217858	UndefinedConstructor	ConstructorRelated + 130	Undefined constructor
134217859	NotVisibleConstructor	ConstructorRelated + 131	Constructor not visible
134217860	AmbiguousConstructor	ConstructorRelated + 132	Ambiguous constructor
134217861	UsingDeprecatedConstructor	ConstructorRelated + 133	Using deprecated constructor
604110006	UnusedPrivateConstructor	Internal + MethodRelated + 134	Unused private constructor
134217863	InstanceFieldDuringConstructorInvocation	ConstructorRelated + 135	Instance field during construction
134217864	InstanceMethodDuringConstructorInvocation	ConstructorRelated + 136	Instance method during construction
134217865	RecursiveConstructorInvocation	ConstructorRelated + 137	Recursive constructor
134217866	ThisSuperDuringConstructorInvocation	ConstructorRelated + 138	this/super during construction
1207959691	InvalidExplicitConstructorCall	ConstructorRelated + Syntax + 139	Invalid explicit constructor call

## 7. Syntax Errors

Error ID	Constant Name	Value	Description
1610612940	ParsingError	Syntax + Internal + 204	Parsing error
1610612941	ParsingErrorNoSuggestion	Syntax + Internal + 205	Parsing error (no suggestion)
1610612942	InvalidUnaryExpression	Syntax + Internal + 206	Invalid unary expression
1610612943	InterfaceCannotHaveConstructors	Syntax + Internal + 207	Interface cannot have constructors
1610612944	ArrayConstantsOnlyInArrayInitializers	Syntax + Internal + 208	Array constants only in initializers
1610612945	ParsingErrorOnKeyword	Syntax + Internal + 209	Parsing error on keyword
1610612946	ParsingErrorOnKeywordNoSuggestion	Syntax + Internal + 210	Parsing error on keyword (no suggestion)
1610612956	UnmatchedBracket	Syntax + Internal + 220	Unmatched bracket
1610612958	InvalidExpressionAsStatement	Syntax + Internal + 222	Invalid expression as statement
1610612959	ExpressionShouldBeAVariable	Syntax + Internal + 223	Expression should be variable
1610612960	MissingSemiColon	Syntax + Internal + 224	Missing semicolon
1610612961	InvalidParenthesizedExpression	Syntax + Internal + 225	Invalid parenthesized expression

## 8. Scanner/Lexical Errors

Error ID	Constant Name	Value	Description
1610612986	EndOfSource	Syntax + Internal + 250	End of source
1610612987	InvalidHexa	Syntax + Internal + 251	Invalid hexadecimal
1610612988	InvalidOctal	Syntax + Internal + 252	Invalid octal
1610612989	InvalidCharacterConstant	Syntax + Internal + 253	Invalid character constant
1610612990	InvalidEscape	Syntax + Internal + 254	Invalid escape sequence
1610612991	InvalidInput	Syntax + Internal + 255	Invalid input
1610612992	InvalidUnicodeEscape	Syntax + Internal + 256	Invalid unicode escape
1610612993	InvalidFloat	Syntax + Internal + 257	Invalid float
1610612994	NullSourceString	Syntax + Internal + 258	Null source string
1610612995	UnterminatedString	Syntax + Internal + 259	Unterminated string
1610612996	UnterminatedComment	Syntax + Internal + 260	Unterminated comment
536870997	NonExternalizedStringLiteral	Internal + 261	Non-externalized string literal
1610612998	InvalidDigit	Syntax + Internal + 262	Invalid digit
1610613002	InvalidBinary	Syntax + Internal + 266	Invalid binary literal
1610613003	BinaryLiteralNotBelow17	Syntax + Internal + 267	Binary literal requires Java 7+
1610613004	IllegalUnderscorePosition	Syntax + Internal + 268	Illegal underscore position
1610613005	UnderscoresInLiteralsNotBelow17	Syntax + Internal + 269	Underscores require Java 7+
1610613006	IllegalHexaLiteral	Syntax + Internal + 270	Illegal hexadecimal literal

## 9. Import Errors



Error ID	Constant Name	Value	Description
268435841	ConflictingImport	ImportRelated + 385	Conflicting import
268435842	DuplicateImport	ImportRelated + 386	Duplicate import
268435843	CannotImportPackage	ImportRelated + 387	Cannot import package
268435844	UnusedImport	ImportRelated + 388	Unused import
268435846	ImportNotFound	ImportRelated + 389 + NotFound	Import not found
268435847	InvalidTypeForStaticImport	ImportRelated + 391	Invalid type for static import

## 10. Annotation Errors

Error ID	Constant Name	Value	Description
67109200	IllegalModifierForAnnotationMethod	MethodRelated + 600	Illegal modifier for annotation method
67109201	IllegalExtendedDimensions	MethodRelated + 601	Illegal extended dimensions
1610613338	InvalidFileNameForPackageAnnotations	Syntax + Internal + 602	Invalid filename for package annotations
16777819	IllegalModifierForAnnotationType	TypeRelated + 603	Illegal modifier for annotation type
16777820	IllegalModifierForAnnotationMemberType	TypeRelated + 604	Illegal modifier for annotation member
16777821	InvalidAnnotationMemberType	TypeRelated + 605	Invalid annotation member type
16777822	AnnotationCircularitySelfReference	TypeRelated + 606	Annotation circularity
16777823	AnnotationCircularity	TypeRelated + 607	Annotation circularity
16777824	DuplicateAnnotation	TypeRelated + 608	Duplicate annotation
16777825	MissingValueForAnnotationMember	TypeRelated + 609	Missing value for annotation member
536871222	DuplicateAnnotationMember	Internal + 610	Duplicate annotation member
67109227	UndefinedAnnotationMember	MethodRelated + 611	Undefined annotation member
536871224	AnnotationValueMustBeClassLiteral	Internal + 612	Value must be class literal
536871225	AnnotationValueMustBeConstant	Internal + 613	Value must be constant
67109232	AnnotationCannotOverrideMethod	MethodRelated + 616	Annotation cannot override method
16777838	DisallowedTargetForAnnotation	TypeRelated + 622	Disallowed target for annotation
67109239	MethodMustOverride	MethodRelated + 623	Method must override
67109243	MissingOverrideAnnotation	MethodRelated + 627	Missing @Override annotation

## 11. Generics Errors

Error ID	Constant Name	Value	Description
536871132	DuplicateTypeVariable	Internal + 520	Duplicate type variable
536871134	NonStaticTypeFromStaticInvocation	Internal + 522	Non-static type from static
536871135	ObjectCannotBeGeneric	Internal + 523	Object cannot be generic
16777740	NonGenericType	TypeRelated + 524	Non-generic type
16777741	IncorrectArityForParameterizedType	TypeRelated + 525	Incorrect arity for parameterized type
16777742	TypeArgumentMismatch	TypeRelated + 526	Type argument mismatch
16777743	DuplicateMethodErasure	TypeRelated + 527	Duplicate method erasure
16777744	ReferenceToForwardTypeVariable	TypeRelated + 528	Reference to forward type variable
16777745	BoundMustBeAnInterface	TypeRelated + 529	Bound must be an interface
16777746	UnsafeRawConstructorInvocation	TypeRelated + 530	Unsafe raw constructor invocation
16777747	UnsafeRawMethodInvocation	TypeRelated + 531	Unsafe raw method invocation
16777748	UnsafeTypeConversion	TypeRelated + 532	Unsafe type conversion
16777749	InvalidTypeVariableExceptionType	TypeRelated + 533	Invalid type variable exception
16777750	InvalidParameterizedExceptionType	TypeRelated + 534	Invalid parameterized exception
16777751	IllegalGenericArray	TypeRelated + 535	Illegal generic array
16777752	UnsafeRawFieldAssignment	TypeRelated + 536	Unsafe raw field assignment
16777753	FinalBoundForTypeVariable	TypeRelated + 537	Final bound for type variable
536871150	UndefinedTypeVariable	Internal + 538	Undefined type variable
16777761	UnsafeGenericCast	TypeRelated + 545	Unsafe generic cast
16777772	GenericTypeCannotExtendThrowable	TypeRelated + 557	Generic type cannot extend Throwable
16777773	IllegalClassLiteralForTypeVariable	TypeRelated + 558	Illegal class literal for type variable
67109175	UnsafeReturnTypeOverride	MethodRelated +	Unsafe return type

67109176	MethodNameClash	MethodRelated + 560	Method name clash
16777777	RawMemberTypeCannotBeParameterized	TypeRelated + 561	Raw member type cannot be parameterized
16777788	RawTypeReference	TypeRelated + 572	Raw type reference

## 12. Enum Errors

Error ID	Constant Name	Value	Description
16777966	IllegalModifierForEnum	TypeRelated + 750	Illegal modifier for enum
33554983	IllegalModifierForEnumConstant	FieldRelated + 751	Illegal modifier for enum constant
16777969	IllegalModifierForMemberEnum	TypeRelated + 753	Illegal modifier for member enum
67109370	CannotDeclareEnumSpecialMethod	MethodRelated + 754	Cannot declare enum special method
33554987	IllegalQualifiedEnumConstantLabel	FieldRelated + 755	Illegal qualified enum constant
16777972	CannotExtendEnum	TypeRelated + 756	Cannot extend enum
67109373	CannotInvokeSuperConstructorInEnum	MethodRelated + 757	Cannot invoke super in enum
67109374	EnumAbstractMethodMustBeImplemented	MethodRelated + 758	Enum abstract method must be implemented
33554991	EnumSwitchCannotTargetField	FieldRelated + 759	Enum switch cannot target field
67109376	IllegalModifierForEnumConstructor	MethodRelated + 760	Illegal modifier for enum constructor
33554993	MissingEnumConstantCase	FieldRelated + 761	Missing enum constant case

## 13. Varargs Errors

Error ID	Constant Name	Value	Description
1610613536	IllegalExtendedDimensionsForVarArgs	Syntax + Internal + 800	Illegal extended dimensions for varargs
67109417	MethodVarargsArgumentNeedCast	MethodRelated + 801	Method varargs argument needs cast
134218418	ConstructorVarargsArgumentNeedCast	ConstructorRelated + 802	Constructor varargs argument needs cast
67109419	VarargsConflict	MethodRelated + 803	Varargs conflict
67109420	SafeVarargsOnFixedArityMethod	MethodRelated + 804	@SafeVarargs on fixed arity method
67109421	SafeVarargsOnNonFinalInstanceMethod	MethodRelated + 805	@SafeVarargs on non-final instance
67109422	PotentialHeapPollutionFromVararg	MethodRelated + 806	Potential heap pollution from vararg

## 14. Java 7+ Features

Error ID	Constant Name	Value	Description
536871758	AssignmentToMultiCatchParameter	Internal + 870	Assignment to multi-catch parameter
16778087	ResourceHasToImplementAutoCloseable	TypeRelated + 871	Resource must implement AutoCloseable
536871760	AssignmentToResource	Internal + 872	Assignment to resource
16778089	InvalidUnionTypeReferenceSequence	Internal + TypeRelated + 873	Invalid union type reference
1610613610	AutoManagedResourceNotBelow17	Syntax + Internal + 874	Auto-managed resource requires Java 7+
1610613611	MultiCatchNotBelow17	Syntax + Internal + 875	Multi-catch requires Java 7+
67109492	PolymorphicMethodNotBelow17	MethodRelated + 876	Polymorphic method requires Java 7+
16778093	SwitchOnStringsNotBelow17	TypeRelated + 881	Switch on strings requires Java 7+
16778099	DiamondNotBelow17	TypeRelated + 883	Diamond operator requires Java 7+

## 15. Lambda & Functional Interface Errors (Java 8+)

Error ID	Constant Name	Value	Description
1610613381	LambdaExpressionNotBelow18	Internal + Syntax + 645	Lambda requires Java 8+
1610613382	MethodReferenceNotBelow18	Internal + Syntax + 646	Method reference requires Java 8+
1610613383	ConstructorReferenceNotBelow18	Internal + Syntax + 647	Constructor reference requires Java 8+
16778005	TargetTypeNotAFunctionalInterface	Internal + TypeRelated + 653	Target type not functional interface
16778006	IllegalVarargInLambda	Internal + TypeRelated + 654	Illegal vararg in lambda
16778007	illFormedParameterizationOfFunctionalInterface	Internal + TypeRelated + 655	Ill-formed parameterization
16778008	lambdaSignatureMismatched	Internal + TypeRelated + 656	Lambda signature mismatched
16778009	lambdaParameterTypeMismatched	Internal + TypeRelated + 657	Lambda parameter type mismatched
16778010	IncompatibleLambdaParameterType	Internal + TypeRelated + 658	Incompatible lambda parameter type
16778011	NoGenericLambda	Internal + TypeRelated + 659	No generic lambda

## 16. Default Methods (Java 8+)

Error ID	Constant Name	Value	Description
67109666	IllegalModifierForInterfaceMethod18	MethodRelated + 1050	Illegal modifier for interface method (Java 8)
67109667	DefaultMethodOverridesObjectMethod	MethodRelated + 1051	Default method overrides Object method
67109668	InheritedDefaultMethodConflictsWithOtherInherited	MethodRelated + 1052	Inherited default method conflicts
67109669	DuplicateInheritedDefaultMethods	MethodRelated + 1053	Duplicate inherited default methods
16778270	SuperAccessCannotBypassDirectSuper	TypeRelated + 1054	Super access cannot bypass direct super
67109671	SuperCallCannotBypassOverride	MethodRelated + 1055	Super call cannot bypass override
1610614396	DefaultMethodNotBelow18	Internal + Syntax + 644	Default method requires Java 8+

## 17. Module System Errors (Java 9+)

Error ID	Constant Name	Value	Description
8389140	UndefinedModule	ModuleRelated + 1300	Undefined module
8389141	DuplicateRequires	ModuleRelated + 1301	Duplicate requires
8389142	DuplicateExports	ModuleRelated + 1302	Duplicate exports
8389143	DuplicateUses	ModuleRelated + 1303	Duplicate uses
8389144	DuplicateServices	ModuleRelated + 1304	Duplicate services
8389145	CyclicModuleDependency	ModuleRelated + 1305	Cyclic module dependency
16778546	AbstractServiceImplementation	TypeRelated + 1306	Abstract service implementation
16778547	ProviderMethodOrConstructorRequiredForServiceImpl	TypeRelated + 1307	Provider method/ constructor required
16778548	ServiceImplDefaultConstructorNotPublic	TypeRelated + 1308	Service impl constructor not public
16778549	NestedServiceImpl	TypeRelated + 1309	Nested service implementation
16778550	ServiceImplNotDefinedByModule	TypeRelated + 1310	Service impl not defined by module
8389151	PackageDoesNotExistOrIsEmpty	ModuleRelated + 1311	Package does not exist or is empty
8389159	UndefinedModuleAddReads	ModuleRelated + 1319	Undefined module in --add-reads
8389160	ExportingForeignPackage	ModuleRelated + 1320	Exporting foreign package
8389295	ConflictingPackageFromModules	ModuleRelated + 1455	Conflicting package from modules
8389296	ConflictingPackageFromOtherModules	ModuleRelated + 1456	Conflicting package from other modules
8389300	UnnamedPackageInNamedModule	ModuleRelated	Unnamed package in



8389300	UnstableAutoModuleName	+ 1460	named module
8389301	UnstableAutoModuleName	ModuleRelated + 1461	Unstable automatic module name

## 18. Local Variable Type Inference (Java 10+)

Error ID	Constant Name	Value	Description
1610615036	VarLocalMultipleDeclarators	Syntax + 1500	var not allowed in compound declaration
1610615037	VarLocalCannotBeArray	Syntax + 1501	var not allowed as array element type
1610615038	VarLocalReferencesItself	Syntax + 1502	var declaration references itself
1610615039	VarLocalWithoutInitizalier	Syntax + 1503	var without initializer
16778740	VarLocalInitializedToNull	TypeRelated + 1504	var initialized to null
16778741	VarLocalInitializedToVoid	TypeRelated + 1505	var initialized to void
16778742	VarLocalCannotBeArrayInitalizers	TypeRelated + 1506	var cannot be array initializers
16778743	VarLocalCannotBeLambda	TypeRelated + 1507	var cannot be lambda
16778744	VarLocalCannotBeMethodReference	TypeRelated + 1508	var cannot be method reference
1610615045	VarIsReserved	Syntax + 1509	var is not a valid type name
1610615047	VarIsNotAllowedHere	Syntax + 1511	var is not allowed here

## 🎯 MOST COMMON ERRORS FOR SCRATCH-LIKE APPS (Without Classes)

For a visual block-based programming environment focused on game bot automation without classes, these are the **most critical errors** to handle:

### PRIORITY 1: Must Handle (Core Functionality)

Error ID	Constant Name	Problem	When It Happens	Example
1610612960	MissingSemiColon	Missing ;	User forgets semicolon at end of statement	<code>int x = 5</code> ❌ → <code>int x = 5;</code> ✅
16777233	TypeMismatch	Wrong type assigned	Putting string in number variable	<code>int x = "hello";</code> ❌
536870963	UninitializedLocalVariable	Using variable before setting	Using variable without value	<code>int x; return x;</code> ❌
570425394	UndefinedName	Variable doesn't exist	Typo or forgot to declare	<code>x = 5;</code> (x not declared) ❌
67108964	UndefinedMethod	Method doesn't exist	Calling wrong function name	<code>bot.clck()</code> instead of <code>bot.click()</code> ❌
67108979	ParameterMismatch	Wrong number/type of arguments	Function expects 2 params, got 1	<code>bot.move(100)</code> when it needs <code>bot.move(100, 200)</code> ❌
1610612941	ParsingErrorNoSuggestion	General syntax error	Malformed code	<code>if (x == 5</code> (missing <code>)</code> ) ❌
536870967	RedefinedLocal	Declaring same variable twice	Using same name twice	<code>int x = 5; int x = 10;</code> ❌

## PRIORITY 2: Important for User Experience

Error ID	Constant Name	Problem	When It Happens
536870973	LocalVariableIsNeverUsed	Unused variable warning	Variable created but never used
603979884	ShouldReturnValue	Missing return statement	Function needs to return value but doesn't
536870970	NonBlankFinalLocalAssignment	Changing constant value	Trying to modify a final variable
1610612995	UnterminatedString	Missing closing quote	<code>String text = "hello;</code> ❌
536870161	CodeCannotBeReached	Dead code	Code after return/break statement
536871185	AssignmentHasNoEffect	Useless assignment	<code>x = x;</code> does nothing

## PRIORITY 3: Loop & Condition Specific

Error ID	Constant Name	Problem	When It Happens
536870908	InvalidBreak	break outside loop	Using break outside while/for
536870909	InvalidContinue	continue outside loop	Using continue outside while/for
536870910	UndefinedLabel	Unknown label	Referencing non-existent label
16777385	IncorrectSwitchType	Wrong switch type	Using unsupported type in switch

**PRIORITY 4: Bot-Specific (Game Automation)**

For game bot automation, you'll likely have methods like:

- `bot.click(x, y)` - Click at position
- `bot.wait(milliseconds)` - Wait/delay
- `bot.move(x, y)` - Move mouse
- `bot.keyPress(key)` - Press keyboard key
- `bot.findImage(imagePath)` - Find image on screen

Common errors:

Scenario	Error	Example
Wrong coordinates	<b>TypeMismatch</b> (16777233)	<code>bot.click("100", 200)</code> - string instead of int
Missing parameter	<b>ParameterMismatch</b> (67108979)	<code>bot.click(100)</code> - needs 2 params
Undefined method	<b>UndefinedMethod</b> (67108964)	<code>bot.clk(100, 200)</code> - typo
Negative delay	Logic error (no ID)	<code>bot.wait(-1000)</code> - negative wait time

**Example Error Mapping for Your UI**

javascript

```
const COMMON_ERRORS = {  
  // Syntax Errors  
  1610612960: {  
    message: "Missing semicolon (;) at end of line",  
    severity: "error",  
    quickFix: "Add ; at the end"  
  },  
  1610612995: {  
    message: "String is not closed - missing closing quote",  
    severity: "error",  
    quickFix: "Add closing \" at the end"  
  },  
  
  // Variable Errors  
  570425394: {  
    message: "Variable '{0}' doesn't exist - did you forget to create it?",  
    severity: "error",  
    quickFix: "Drag 'Create Variable' block first"  
  },  
  536870963: {  
    message: "Variable '{0}' is used before being set",  
    severity: "error",  
    quickFix: "Set the variable before using it"  
  },  
  536870967: {  
    message: "Variable '{0}' already exists - choose a different name",  
    severity: "error",  
    quickFix: "Rename this variable"  
  },  
  
  // Type Errors  
  16777233: {  
    message: "Wrong type: expected {0} but got {1}",  
    severity: "error",  
    quickFix: "Convert to correct type"  
  },  
  
  // Method Errors  
  67108964: {  
    message: "Function '{0}' doesn't exist - check the spelling",  
    severity: "error",  
    quickFix: "Did you mean '{1}'?"  
  },  
  67108979: {  
    message: "Function '{0}' expects {1} parameters but got {2}",  
    severity: "error",  
    quickFix: "Add missing parameters"  
  },  
}
```

```

},

// Warnings (less critical)
536870973: {
  message: "Variable '{0}' is created but never used",
  severity: "warning",
  quickFix: "Remove unused variable"
}
};

```

## Recommendation for Your Scratch-like App

Since users won't write classes and **YOU control the syntax** (blocks generate correct syntax), you only need to handle **RUNTIME/LOGIC errors**:

### ✓ ACTUALLY NEEDED (Only 6 Error IDs!)

Error ID	Constant Name	Why You Need It	Block Example
16777233	TypeMismatch	User puts wrong type in editable field	bot.click("text", 200) - string instead of number
570425394	UndefinedName	User types variable name that doesn't exist	User types playerX but variable is called playerPos
536870963	UninitializedLocalVariable	Using variable before setting value	"Get Variable" block used before "Set Variable"
536870967	RedefinedLocal	Creating variable with same name twice	Two "Create Variable X" blocks
67108979	ParameterMismatch	Wrong method signature (if you allow custom methods)	Custom function expects 2 params but called with 1
603979884	ShouldReturnValue	Function needs return but missing	Custom function block without return statement

### ✗ NOT NEEDED (You Generate These Correctly)

Error ID	Why You DON'T Need It
1610612960	MissingSemiColon - <b>Your blocks add semicolons automatically</b>
1610612995	UnterminatedString - <b>Your blocks handle quotes</b>
1610612941	ParsingError - <b>Your blocks generate valid syntax</b>
67108964	UndefinedMethod - <b>Your blocks only show valid methods</b>
536870908	InvalidBreak - <b>Your blocks prevent break outside loops</b>
536870909	InvalidContinue - <b>Your blocks prevent continue outside loops</b>

### 🎯 MINIMAL SET: Just 3 Error IDs if You Want Super Simple

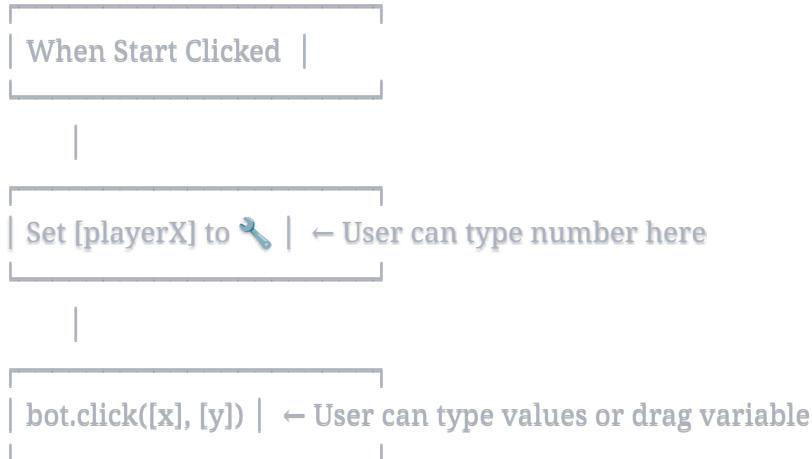
If you want the absolute minimum:

1. **16777233** (TypeMismatch) - User edits fields with wrong type
2. **570425394** (UndefinedName) - User types wrong variable name
3. **536870963** (UninitializedLocalVariable) - Variable used before set

These 3 cover 95% of possible errors in a well-designed block system.

## 💡 Real-World Example

User's Blocks:



Possible Errors:

- ✗ **TypeMismatch** (16777233): User types "abc" in playerX field
- ✗ **UndefinedName** (570425394): User types "playerY" in bot.click but it doesn't exist
- ✗ **UninitializedLocalVariable** (536870963): User uses playerX in bot.click before Set block

## 📋 Implementation Priority

**Phase 1 (MVP):** Handle these 3

- 16777233 (TypeMismatch)
- 570425394 (UndefinedName)
- 536870963 (UninitializedLocalVariable)

**Phase 2 (Polish):** Add these 3

- 536870967 (RedefinedLocal)
- 67108979 (ParameterMismatch)
- 603979884 (ShouldReturnValue)

**Done!** You don't need the other 1,994+ error codes. 😊