## **Stages**

In the [db.collection.aggregate](https://docs.mongodb.com/v3.2/reference/method/db.collection.aggregate/#db.collection.aggregate) method, pipeline stages appear in an array. Documents pass through the stages in sequence. All except the [$out](https://docs.mongodb.com/v3.2/reference/operator/aggregation/out/#pipe._S_out) and [$geoNear](https://docs.mongodb.com/v3.2/reference/operator/aggregation/geoNear/#pipe._S_geoNear) stages can appear multiple times in a pipeline.

db.collection.aggregate( [ { <stage> }, ... ] )

|  |  |
| --- | --- |
| **Name** | **Description** |
| [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) | Reshapes each document in the stream, such as by adding new fields or removing existing fields. For each input document, outputs one document. |
| [$match](https://docs.mongodb.com/v3.2/reference/operator/aggregation/match/#pipe._S_match) | Filters the document stream to allow only matching documents to pass unmodified into the next pipeline stage. [$match](https://docs.mongodb.com/v3.2/reference/operator/aggregation/match/#pipe._S_match) uses standard MongoDB queries. For each input document, outputs either one document (a match) or zero documents (no match). |
| [$redact](https://docs.mongodb.com/v3.2/reference/operator/aggregation/redact/#pipe._S_redact) | Reshapes each document in the stream by restricting the content for each document based on information stored in the documents themselves. Incorporates the functionality of[$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) and [$match](https://docs.mongodb.com/v3.2/reference/operator/aggregation/match/#pipe._S_match). Can be used to implement field level redaction. For each input document, outputs either one or zero documents. |
| [$limit](https://docs.mongodb.com/v3.2/reference/operator/aggregation/limit/#pipe._S_limit) | Passes the first *n* documents unmodified to the pipeline where *n* is the specified limit. For each input document, outputs either one document (for the first *n* documents) or zero documents (after the first *n* documents). |
| [$skip](https://docs.mongodb.com/v3.2/reference/operator/aggregation/skip/#pipe._S_skip) | Skips the first *n* documents where *n* is the specified skip number and passes the remaining documents unmodified to the pipeline. For each input document, outputs either zero documents (for the first *n* documents) or one document (if after the first *n*documents). |
| [$unwind](https://docs.mongodb.com/v3.2/reference/operator/aggregation/unwind/#pipe._S_unwind) | Deconstructs an array field from the input documents to output a document for *each*element. Each output document replaces the array with an element value. For each input document, outputs *n* documents where *n* is the number of array elements and can be zero for an empty array. |
| [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) | Groups input documents by a specified identifier expression and applies the accumulator expression(s), if specified, to each group. Consumes all input documents and outputs one document per each distinct group. The output documents only contain the identifier field and, if specified, accumulated fields. |
| [$sample](https://docs.mongodb.com/v3.2/reference/operator/aggregation/sample/#pipe._S_sample) | Randomly selects the specified number of documents from its input. |
| [$sort](https://docs.mongodb.com/v3.2/reference/operator/aggregation/sort/#pipe._S_sort) | Reorders the document stream by a specified sort key. Only the order changes; the documents remain unmodified. For each input document, outputs one document. |
| [$geoNear](https://docs.mongodb.com/v3.2/reference/operator/aggregation/geoNear/#pipe._S_geoNear) | Returns an ordered stream of documents based on the proximity to a geospatial point. Incorporates the functionality of [$match](https://docs.mongodb.com/v3.2/reference/operator/aggregation/match/#pipe._S_match), [$sort](https://docs.mongodb.com/v3.2/reference/operator/aggregation/sort/#pipe._S_sort), and [$limit](https://docs.mongodb.com/v3.2/reference/operator/aggregation/limit/#pipe._S_limit) for geospatial data. The output documents include an additional distance field and can include a location identifier field. |
| [$lookup](https://docs.mongodb.com/v3.2/reference/operator/aggregation/lookup/#pipe._S_lookup) | Performs a left outer join to another collection in the *same* database to filter in documents from the “joined” collection for processing. |
| [$out](https://docs.mongodb.com/v3.2/reference/operator/aggregation/out/#pipe._S_out) | Writes the resulting documents of the aggregation pipeline to a collection. To use the[$out](https://docs.mongodb.com/v3.2/reference/operator/aggregation/out/#pipe._S_out) stage, it must be the last stage in the pipeline. |
| [$indexStats](https://docs.mongodb.com/v3.2/reference/operator/aggregation/indexStats/#pipe._S_indexStats) | Returns statistics regarding the use of each index for the collection. |

## **Expressions**

Expressions can include [field paths and system variables](https://docs.mongodb.com/v3.2/meta/aggregation-quick-reference/#agg-quick-ref-field-paths), [literals](https://docs.mongodb.com/v3.2/meta/aggregation-quick-reference/#agg-quick-ref-literals), [expression objects](https://docs.mongodb.com/v3.2/meta/aggregation-quick-reference/#agg-quick-ref-expression-objects), and [expression operators](https://docs.mongodb.com/v3.2/meta/aggregation-quick-reference/#agg-quick-ref-operator-expressions). Expressions can be nested.

### **Field Path and System Variables**

Aggregation expressions use [field path](https://docs.mongodb.com/v3.2/reference/glossary/#term-field-path) to access fields in the input documents. To specify a field path, use a string that prefixes with a dollar sign $ the field name or the dotted field name, if the field is in embedded document. For example, "$user" to specify the field path for the user field or "$user.name" to specify the field path to "user.name" field.

"$<field>" is equivalent to "$$CURRENT.<field>" where the [CURRENT](https://docs.mongodb.com/v3.2/reference/aggregation-variables/#variable.CURRENT) is a system variable that defaults to the root of the current object in the most stages, unless stated otherwise in specific stages.[CURRENT](https://docs.mongodb.com/v3.2/reference/aggregation-variables/#variable.CURRENT) can be rebound.

Along with the [CURRENT](https://docs.mongodb.com/v3.2/reference/aggregation-variables/#variable.CURRENT) system variable, other [system variables](https://docs.mongodb.com/v3.2/reference/aggregation-variables/#agg-system-variables) are also available for use in expressions. To use user-defined variables, use [$let](https://docs.mongodb.com/v3.2/reference/operator/aggregation/let/#exp._S_let) and [$map](https://docs.mongodb.com/v3.2/reference/operator/aggregation/map/#exp._S_map) expressions. To access variables in expressions, use a string that prefixes the variable name with $$.

### **Literals**

Literals can be of any type. However, MongoDB parses string literals that start with a dollar sign $ as a path to a field and numeric/boolean literals in [expression objects](https://docs.mongodb.com/v3.2/meta/aggregation-quick-reference/#agg-quick-ref-expression-objects) as projection flags. To avoid parsing literals, use the[$literal](https://docs.mongodb.com/v3.2/reference/operator/aggregation/literal/#exp._S_literal) expression.

### **Expression Objects**

Expression objects have the following form:

{ <field1>: <expression1>, ... }

If the expressions are numeric or boolean literals, MongoDB treats the literals as projection flags (e.g. 1 ortrue to include the field), valid only in the [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stage. To avoid treating numeric or boolean literals as projection flags, use the [$literal](https://docs.mongodb.com/v3.2/reference/operator/aggregation/literal/#exp._S_literal) expression to wrap the numeric or boolean literals.

### **Operator Expressions**

Operator expressions are similar to functions that take arguments. In general, these expressions take an array of arguments and have the following form:

{ <operator>: [ <argument1>, <argument2> ... ] }

If operator accepts a single argument, you can omit the outer array designating the argument list:

{ <operator>: <argument> }

To avoid parsing ambiguity if the argument is a literal array, you must wrap the literal array in a [$literal](https://docs.mongodb.com/v3.2/reference/operator/aggregation/literal/#exp._S_literal)expression or keep the outer array that designates the argument list.

#### **Boolean Expressions**

Boolean expressions evaluate their argument expressions as booleans and return a boolean as the result.

In addition to the false boolean value, Boolean expression evaluates as false the following: null, 0, andundefined values. The Boolean expression evaluates all other values as true, including non-zero numeric values and arrays.

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| --- | --- |
| **Name** | **Description** |
| [$and](https://docs.mongodb.com/v3.2/reference/operator/aggregation/and/#exp._S_and) | Returns true only when *all* its expressions evaluate to true. Accepts any number of argument expressions. |
| [$or](https://docs.mongodb.com/v3.2/reference/operator/aggregation/or/#exp._S_or) | Returns true when *any* of its expressions evaluates to true. Accepts any number of argument expressions. |
| [$not](https://docs.mongodb.com/v3.2/reference/operator/aggregation/not/#exp._S_not) | Returns the boolean value that is the opposite of its argument expression. Accepts a single argument expression. |

#### **Set Expressions**

Set expressions performs set operation on arrays, treating arrays as sets. Set expressions ignores the duplicate entries in each input array and the order of the elements.

If the set operation returns a set, the operation filters out duplicates in the result to output an array that contains only unique entries. The order of the elements in the output array is unspecified.

If a set contains a nested array element, the set expression does *not* descend into the nested array but evaluates the array at top-level.

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| --- | --- |
| **Name** | **Description** |
| [$setEquals](https://docs.mongodb.com/v3.2/reference/operator/aggregation/setEquals/#exp._S_setEquals) | Returns true if the input sets have the same distinct elements. Accepts two or more argument expressions. |
| [$setIntersection](https://docs.mongodb.com/v3.2/reference/operator/aggregation/setIntersection/#exp._S_setIntersection) | Returns a set with elements that appear in *all* of the input sets. Accepts any number of argument expressions. |
| [$setUnion](https://docs.mongodb.com/v3.2/reference/operator/aggregation/setUnion/#exp._S_setUnion) | Returns a set with elements that appear in *any* of the input sets. Accepts any number of argument expressions. |
| [$setDifference](https://docs.mongodb.com/v3.2/reference/operator/aggregation/setDifference/#exp._S_setDifference) | Returns a set with elements that appear in the first set but not in the second set; i.e. performs a [relative complement](http://en.wikipedia.org/wiki/Complement_(set_theory)) of the second set relative to the first. Accepts exactly two argument expressions. |
| [$setIsSubset](https://docs.mongodb.com/v3.2/reference/operator/aggregation/setIsSubset/#exp._S_setIsSubset) | Returns true if all elements of the first set appear in the second set, including when the first set equals the second set; i.e. not a [strict subset](http://en.wikipedia.org/wiki/Subset). Accepts exactly two argument expressions. |
| [$anyElementTrue](https://docs.mongodb.com/v3.2/reference/operator/aggregation/anyElementTrue/#exp._S_anyElementTrue) | Returns true if *any* elements of a set evaluate to true; otherwise, returns false. Accepts a single argument expression. |
| [$allElementsTrue](https://docs.mongodb.com/v3.2/reference/operator/aggregation/allElementsTrue/#exp._S_allElementsTrue) | Returns true if *no* element of a set evaluates to false, otherwise, returns false. Accepts a single argument expression. |

#### **Comparison Expressions**

Comparison expressions return a boolean except for [$cmp](https://docs.mongodb.com/v3.2/reference/operator/aggregation/cmp/#exp._S_cmp) which returns a number.

The comparison expressions take two argument expressions and compare both value and type, using the[specified BSON comparison order](https://docs.mongodb.com/v3.2/reference/bson-types/#bson-types-comparison-order) for values of different types.

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| --- | --- |
| **Name** | **Description** |
| [$cmp](https://docs.mongodb.com/v3.2/reference/operator/aggregation/cmp/#exp._S_cmp) | Returns: 0 if the two values are equivalent, 1 if the first value is greater than the second, and -1 if the first value is less than the second. |
| [$eq](https://docs.mongodb.com/v3.2/reference/operator/aggregation/eq/#exp._S_eq) | Returns true if the values are equivalent. |
| [$gt](https://docs.mongodb.com/v3.2/reference/operator/aggregation/gt/#exp._S_gt) | Returns true if the first value is greater than the second. |
| [$gte](https://docs.mongodb.com/v3.2/reference/operator/aggregation/gte/#exp._S_gte) | Returns true if the first value is greater than or equal to the second. |
| [$lt](https://docs.mongodb.com/v3.2/reference/operator/aggregation/lt/#exp._S_lt) | Returns true if the first value is less than the second. |
| [$lte](https://docs.mongodb.com/v3.2/reference/operator/aggregation/lte/#exp._S_lte) | Returns true if the first value is less than or equal to the second. |
| [$ne](https://docs.mongodb.com/v3.2/reference/operator/aggregation/ne/#exp._S_ne) | Returns true if the values are *not* equivalent. |

#### **Arithmetic Expressions**

Arithmetic expressions perform mathematic operations on numbers. Some arithmetic expressions can also support date arithmetic.

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| **Name** | **Description** |
| [$abs](https://docs.mongodb.com/v3.2/reference/operator/aggregation/abs/#exp._S_abs) | Returns the absolute value of a number. |
| [$add](https://docs.mongodb.com/v3.2/reference/operator/aggregation/add/#exp._S_add) | Adds numbers to return the sum, or adds numbers and a date to return a new date. If adding numbers and a date, treats the numbers as milliseconds. Accepts any number of argument expressions, but at most, one expression can resolve to a date. |
| [$ceil](https://docs.mongodb.com/v3.2/reference/operator/aggregation/ceil/#exp._S_ceil) | Returns the smallest integer greater than or equal to the specified number. |
| [$divide](https://docs.mongodb.com/v3.2/reference/operator/aggregation/divide/#exp._S_divide) | Returns the result of dividing the first number by the second. Accepts two argument expressions. |
| [$exp](https://docs.mongodb.com/v3.2/reference/operator/aggregation/exp/#exp._S_exp) | Raises *e* to the specified exponent. |
| [$floor](https://docs.mongodb.com/v3.2/reference/operator/aggregation/floor/#exp._S_floor) | Returns the largest integer less than or equal to the specified number. |
| [$ln](https://docs.mongodb.com/v3.2/reference/operator/aggregation/ln/#exp._S_ln) | Calculates the natural log of a number. |
| [$log](https://docs.mongodb.com/v3.2/reference/operator/aggregation/log/#exp._S_log) | Calculates the log of a number in the specified base. |
| [$log10](https://docs.mongodb.com/v3.2/reference/operator/aggregation/log10/#exp._S_log10) | Calculates the log base 10 of a number. |
| [$mod](https://docs.mongodb.com/v3.2/reference/operator/aggregation/mod/#exp._S_mod) | Returns the remainder of the first number divided by the second. Accepts two argument expressions. |
| [$multiply](https://docs.mongodb.com/v3.2/reference/operator/aggregation/multiply/#exp._S_multiply) | Multiplies numbers to return the product. Accepts any number of argument expressions. |
| [$pow](https://docs.mongodb.com/v3.2/reference/operator/aggregation/pow/#exp._S_pow) | Raises a number to the specified exponent. |
| [$sqrt](https://docs.mongodb.com/v3.2/reference/operator/aggregation/sqrt/#exp._S_sqrt) | Calculates the square root. |
| [$subtract](https://docs.mongodb.com/v3.2/reference/operator/aggregation/subtract/#exp._S_subtract) | Returns the result of subtracting the second value from the first. If the two values are numbers, return the difference. If the two values are dates, return the difference in milliseconds. If the two values are a date and a number in milliseconds, return the resulting date. Accepts two argument expressions. If the two values are a date and a number, specify the date argument first as it is not meaningful to subtract a date from a number. |
| [$trunc](https://docs.mongodb.com/v3.2/reference/operator/aggregation/trunc/#exp._S_trunc) | Truncates a number to its integer. |

#### **String Expressions**

String expressions, with the exception of [$concat](https://docs.mongodb.com/v3.2/reference/operator/aggregation/concat/#exp._S_concat), only have a well-defined behavior for strings of ASCII characters.

[$concat](https://docs.mongodb.com/v3.2/reference/operator/aggregation/concat/#exp._S_concat) behavior is well-defined regardless of the characters used.

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| --- | --- |
| **Name** | **Description** |
| [$concat](https://docs.mongodb.com/v3.2/reference/operator/aggregation/concat/#exp._S_concat) | Concatenates any number of strings. |
| [$substr](https://docs.mongodb.com/v3.2/reference/operator/aggregation/substr/#exp._S_substr) | Returns a substring of a string, starting at a specified index position up to a specified length. Accepts three expressions as arguments: the first argument must resolve to a string, and the second and third arguments must resolve to integers. |
| [$toLower](https://docs.mongodb.com/v3.2/reference/operator/aggregation/toLower/#exp._S_toLower) | Converts a string to lowercase. Accepts a single argument expression. |
| [$toUpper](https://docs.mongodb.com/v3.2/reference/operator/aggregation/toUpper/#exp._S_toUpper) | Converts a string to uppercase. Accepts a single argument expression. |
| [$strcasecmp](https://docs.mongodb.com/v3.2/reference/operator/aggregation/strcasecmp/#exp._S_strcasecmp) | Performs case-insensitive string comparison and returns: 0 if two strings are equivalent,1 if the first string is greater than the second, and -1 if the first string is less than the second. |

#### **Text Search Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$meta](https://docs.mongodb.com/v3.2/reference/operator/aggregation/meta/#exp._S_meta) | Access text search metadata. |

#### **Array Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$arrayElemAt](https://docs.mongodb.com/v3.2/reference/operator/aggregation/arrayElemAt/#exp._S_arrayElemAt) | Returns the element at the specified array index. |
| [$concatArrays](https://docs.mongodb.com/v3.2/reference/operator/aggregation/concatArrays/#exp._S_concatArrays) | Concatenates arrays to return the concatenated array. |
| [$filter](https://docs.mongodb.com/v3.2/reference/operator/aggregation/filter/#exp._S_filter) | Selects a subset of the array to return an array with only the elements that match the filter condition. |
| [$isArray](https://docs.mongodb.com/v3.2/reference/operator/aggregation/isArray/#exp._S_isArray) | Determines if the operand is an array. Returns a boolean. |
| [$size](https://docs.mongodb.com/v3.2/reference/operator/aggregation/size/#exp._S_size) | Returns the number of elements in the array. Accepts a single expression as argument. |
| [$slice](https://docs.mongodb.com/v3.2/reference/operator/aggregation/slice/#exp._S_slice) | Returns a subset of an array. |

#### **Variable Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$map](https://docs.mongodb.com/v3.2/reference/operator/aggregation/map/#exp._S_map) | Applies a subexpression to each element of an array and returns the array of resulting values in order. Accepts named parameters. |
| [$let](https://docs.mongodb.com/v3.2/reference/operator/aggregation/let/#exp._S_let) | Defines variables for use within the scope of a subexpression and returns the result of the subexpression. Accepts named parameters. |

#### **Literal Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$literal](https://docs.mongodb.com/v3.2/reference/operator/aggregation/literal/#exp._S_literal) | Return a value without parsing. Use for values that the aggregation pipeline may interpret as an expression. For example, use a [$literal](https://docs.mongodb.com/v3.2/reference/operator/aggregation/literal/#exp._S_literal) expression to a string that starts with a $to avoid parsing as a field path. |

#### **Date Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$dayOfYear](https://docs.mongodb.com/v3.2/reference/operator/aggregation/dayOfYear/#exp._S_dayOfYear) | Returns the day of the year for a date as a number between 1 and 366 (leap year). |
| [$dayOfMonth](https://docs.mongodb.com/v3.2/reference/operator/aggregation/dayOfMonth/#exp._S_dayOfMonth) | Returns the day of the month for a date as a number between 1 and 31. |
| [$dayOfWeek](https://docs.mongodb.com/v3.2/reference/operator/aggregation/dayOfWeek/#exp._S_dayOfWeek) | Returns the day of the week for a date as a number between 1 (Sunday) and 7 (Saturday). |
| [$year](https://docs.mongodb.com/v3.2/reference/operator/aggregation/year/#exp._S_year) | Returns the year for a date as a number (e.g. 2014). |
| [$month](https://docs.mongodb.com/v3.2/reference/operator/aggregation/month/#exp._S_month) | Returns the month for a date as a number between 1 (January) and 12 (December). |
| [$week](https://docs.mongodb.com/v3.2/reference/operator/aggregation/week/#exp._S_week) | Returns the week number for a date as a number between 0 (the partial week that precedes the first Sunday of the year) and 53 (leap year). |
| [$hour](https://docs.mongodb.com/v3.2/reference/operator/aggregation/hour/#exp._S_hour) | Returns the hour for a date as a number between 0 and 23. |
| [$minute](https://docs.mongodb.com/v3.2/reference/operator/aggregation/minute/#exp._S_minute) | Returns the minute for a date as a number between 0 and 59. |
| [$second](https://docs.mongodb.com/v3.2/reference/operator/aggregation/second/#exp._S_second) | Returns the seconds for a date as a number between 0 and 60 (leap seconds). |
| [$millisecond](https://docs.mongodb.com/v3.2/reference/operator/aggregation/millisecond/#exp._S_millisecond) | Returns the milliseconds of a date as a number between 0 and 999. |
| [$dateToString](https://docs.mongodb.com/v3.2/reference/operator/aggregation/dateToString/#exp._S_dateToString) | Returns the date as a formatted string. |

#### **Conditional Expressions**

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| --- | --- |
| **Name** | **Description** |
| [$cond](https://docs.mongodb.com/v3.2/reference/operator/aggregation/cond/#exp._S_cond) | A ternary operator that evaluates one expression, and depending on the result, returns the value of one of the other two expressions. Accepts either three expressions in an ordered list or three named parameters. |
| [$ifNull](https://docs.mongodb.com/v3.2/reference/operator/aggregation/ifNull/#exp._S_ifNull) | Returns either the non-null result of the first expression or the result of the second expression if the first expression results in a null result. Null result encompasses instances of undefined values or missing fields. Accepts two expressions as arguments. The result of the second expression can be null. |

## **Accumulators**

*Changed in version 3.2:* Some accumulators are now available in the [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stage. In previous versions of MongoDB , accumulators are available only for the [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage.

Accumulators, when used in the [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage, maintain their state (e.g. totals, maximums, minimums, and related data) as documents progress through the pipeline.

When used in the [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage, accumulators take as input a single expression, evaluating the expression once for each input document, and maintain their stage for the group of documents that share the same group key.

When used in the [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stage, the accumulators do not maintain their state. When used in the[$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stage, accumulators take as input either a single argument or multiple arguments.

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| --- | --- |
| **Name** | **Description** |
| [$sum](https://docs.mongodb.com/v3.2/reference/operator/aggregation/sum/#grp._S_sum) | Returns a sum of numerical values. Ignores non-numeric values.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |
| [$avg](https://docs.mongodb.com/v3.2/reference/operator/aggregation/avg/#grp._S_avg) | Returns an average of numerical values. Ignores non-numeric values.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |
| [$first](https://docs.mongodb.com/v3.2/reference/operator/aggregation/first/#grp._S_first) | Returns a value from the first document for each group. Order is only defined if the documents are in a defined order.  Available in [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage only. |
| [$last](https://docs.mongodb.com/v3.2/reference/operator/aggregation/last/#grp._S_last) | Returns a value from the last document for each group. Order is only defined if the documents are in a defined order.  Available in [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage only. |
| [$max](https://docs.mongodb.com/v3.2/reference/operator/aggregation/max/#grp._S_max) | Returns the highest expression value for each group.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |
| [$min](https://docs.mongodb.com/v3.2/reference/operator/aggregation/min/#grp._S_min) | Returns the lowest expression value for each group.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |
| [$push](https://docs.mongodb.com/v3.2/reference/operator/aggregation/push/#grp._S_push) | Returns an array of expression values for each group.  Available in [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage only. |
| [$addToSet](https://docs.mongodb.com/v3.2/reference/operator/aggregation/addToSet/#grp._S_addToSet) | Returns an array of *unique* expression values for each group. Order of the array elements is undefined.  Available in [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) stage only. |
| [$stdDevPop](https://docs.mongodb.com/v3.2/reference/operator/aggregation/stdDevPop/#grp._S_stdDevPop) | Returns the population standard deviation of the input values.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |
| [$stdDevSamp](https://docs.mongodb.com/v3.2/reference/operator/aggregation/stdDevSamp/#grp._S_stdDevSamp) | Returns the sample standard deviation of the input values.  *Changed in version 3.2:* Available in both [$group](https://docs.mongodb.com/v3.2/reference/operator/aggregation/group/#pipe._S_group) and [$project](https://docs.mongodb.com/v3.2/reference/operator/aggregation/project/#pipe._S_project) stages. |