



MongoDB Physical Model

Schema for:

Model name: Project Management

Author: Ali Alaoui

Version:

File name: MongoDB model Project Management.json

File path: D:\Documents_Dev\Hackolade\Project_3\MongoDB model Project Management.json

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Created with: [Hackolade](#) - Visual data modeling for NoSQL and multimodel databases

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3.3 fk project. to developer.

3.4 fk project. to developer.

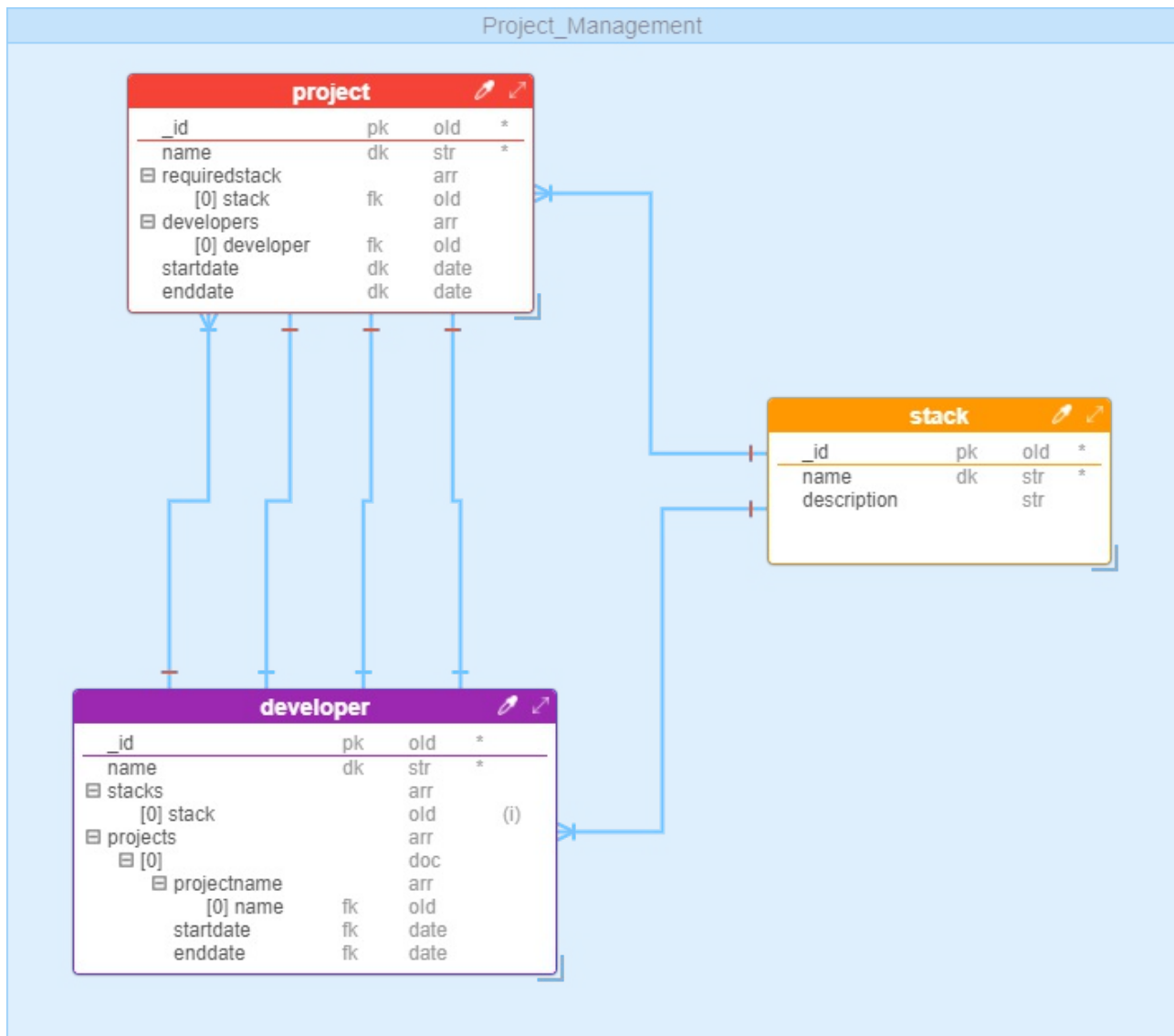
3.5 fk stack. to project.

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1. MODEL

1.1 Model Project Management

1.1.1 Project Management Entity Relationship Diagram



1.1.2 Project Management Properties

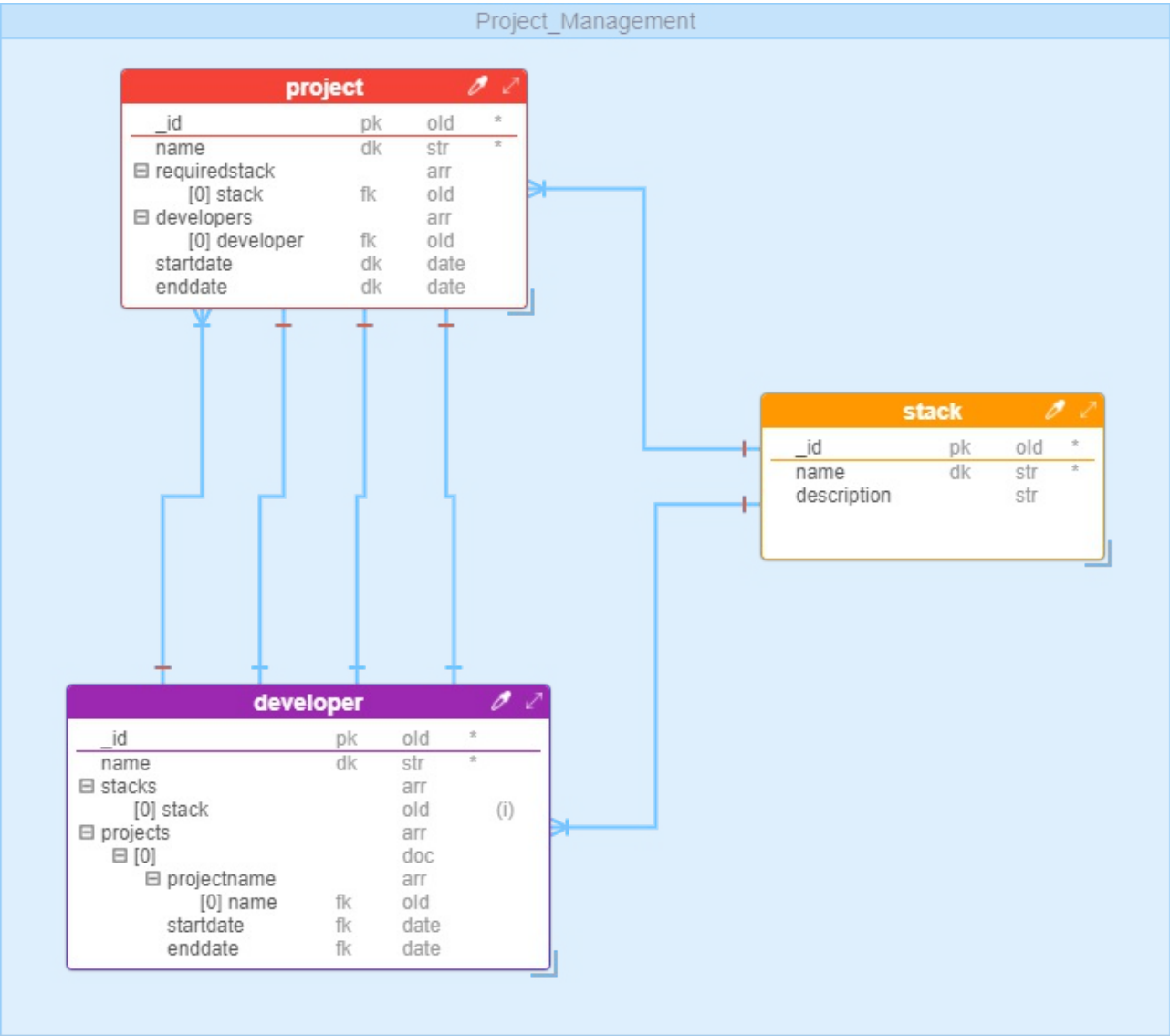
1.1.2.1 Details tab

| PROPERTY | VALUE |
|----------------|--------------------|
| Model name | Project Management |
| Technical name | |
| Description | |
| Author | Ali Alaoui |
| Version | |
| DB vendor | MongoDB |
| DB version | v4.4 |
| Comments | |
| Lineage | |

1.1.3 Project Management DB Definitions

2. DATABASES

2.1 Database Project_Management



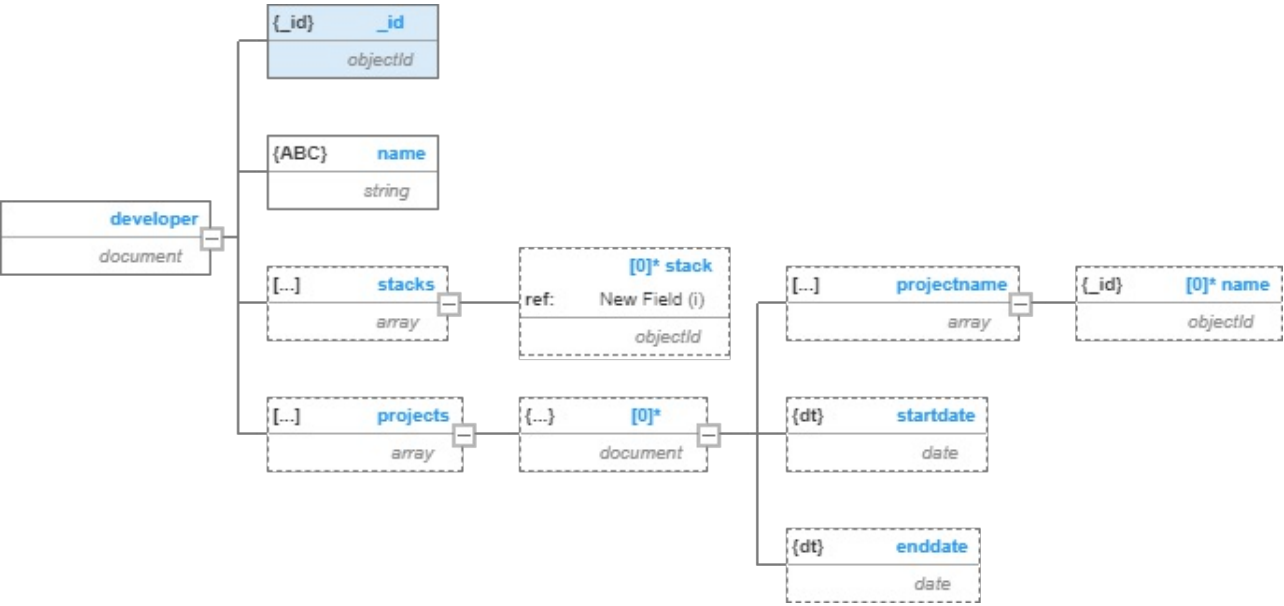
2.1.1 Project_Management Properties

| PROPERTY | VALUE |
|-----------------|--------------------|
| Database name | Project_Management |
| Technical name | |
| Activated | true |
| Enable sharding | |
| Description | |
| Comments | |

2.1.2 Project_Management Collections

2.1.2.1 Collection developer

2.1.2.1.1 developer Tree Diagram



2.1.2.1.2 developer Properties

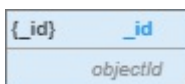
| PROPERTY | VALUE |
|-----------------------|--------------------|
| Collection name | developer |
| Technical name | |
| Activated | true |
| Id | |
| Description | |
| Database | Project_Management |
| Capped | |
| Size | |
| Max | |
| Storage engine | WiredTiger |
| Config String | |
| Validation level | Off |
| Validation action | Warn |
| Additional properties | |
| Comments | |

2.1.2.1.3 developer Fields

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-------------|----------|-------|-----|-------------|----------|
| _id | objectId | true | | | |
| name | string | true | dk | | |
| stacks | array | false | | | |
| [0] stack | objectId | false | | | |
| projects | array | false | | | |
| [0] | document | false | | | |
| projectname | array | false | | | |
| [0] name | objectId | false | fk | | |
| startdate | date | false | fk | | |
| enddate | date | false | fk | | |

2.1.2.1.3.1 Field _id

2.1.2.1.3.1.1 _id Tree Diagram



2.1.2.1.3.1.2 _id properties

| PROPERTY | VALUE |
|--------------------|----------|
| Name | _id |
| Technical name | |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | true |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Sample | |
| Comments | |

2.1.2.1.3.2 Field name

2.1.2.1.3.2.1 name Tree Diagram

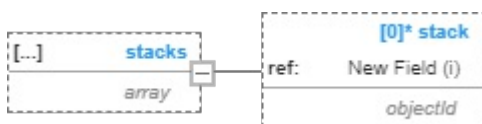


2.1.2.1.3.2.2 name properties

| PROPERTY | VALUE |
|--------------------|--------|
| Name | name |
| Technical name | |
| Activated | true |
| Id | |
| Type | string |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Min length | |
| Max length | |
| Pattern | |
| Format | |
| Enum | |
| Sample | |
| Comments | |

2.1.2.1.3.3 Field stacks

2.1.2.1.3.3.1 stacks Tree Diagram



2.1.2.1.3.3.2 stacks Hierarchy

Parent field: **developer**

Child field(s):

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-----------|-----------|-------|-----|-------------|----------|
| [0] stack | reference | false | | | |

2.1.2.1.3.3.3 stacks properties

| PROPERTY | VALUE |
|--------------------|--------|
| Name | stacks |
| Technical name | |
| Activated | true |
| Id | |
| Type | array |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Min items | |
| Max items | |
| Unique items | |
| Additional items | true |
| Comments | |

2.1.2.1.3.4 Field [0] stack

2.1.2.1.3.4.1 [0] stack Tree Diagram



2.1.2.1.3.4.2 [0] stack properties

| PROPERTY | VALUE |
|-----------------------|-------------------------|
| Name | |
| Activated | true |
| \$ref | #/definitions/New Field |
| Reference type | internal |
| Reference description | |

2.1.2.1.3.5 Field projects

2.1.2.1.3.5.1 projects Tree Diagram



2.1.2.1.3.5.2 projects Hierarchy

Parent field: **developer**

Child field(s):

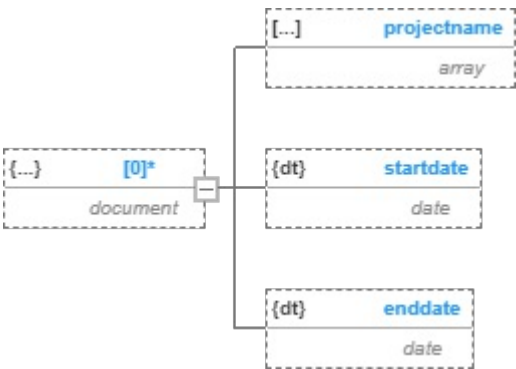
| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-------|----------|-------|-----|-------------|----------|
| [0] | document | false | | | |

2.1.2.1.3.5.3 projects properties

| PROPERTY | VALUE |
|--------------------|----------|
| Name | projects |
| Technical name | |
| Activated | true |
| Id | |
| Type | array |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Min items | |
| Max items | |
| Unique items | |
| Additional items | true |
| Comments | |

2.1.2.1.3.6 Field [0]

2.1.2.1.3.6.1 [0] Tree Diagram



2.1.2.1.3.6.2 [0] Hierarchy

Parent field: **projects**
Child field(s):

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-------------|-------|-------|-----|-------------|----------|
| projectname | array | false | | | |
| startdate | date | false | | | |
| enddate | date | false | | | |

2.1.2.1.3.6.3 [0] properties

| PROPERTY | VALUE |
|-----------------------|----------|
| Display name | |
| Activated | true |
| Id | |
| Type | document |
| Description | |
| Dependencies | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| DBRef | |
| Min Properties | |
| Max Properties | |
| Additional properties | |
| Comments | |

2.1.2.1.3.7 Field projectname

2.1.2.1.3.7.1 projectname Tree Diagram



2.1.2.1.3.7.2 projectname Hierarchy

Parent field: **[0]**

Child field(s):

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|----------|----------|-------|-----|-------------|----------|
| [0] name | objectid | false | | | |

2.1.2.1.3.7.3 projectname properties

| PROPERTY | VALUE |
|--------------------|-------------|
| Name | projectname |
| Technical name | |
| Activated | true |
| Id | |
| Type | array |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Min items | |
| Max items | |
| Unique items | |
| Additional items | true |
| Comments | |

2.1.2.1.3.8 Field [0] name

2.1.2.1.3.8.1 [0] name Tree Diagram



2.1.2.1.3.8.2 [0] name properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Display name | name |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Primary key | |
| Foreign collection | project |
| Foreign field | name |
| Relationship type | Foreign Key |
| Relationship name | fk project. to developer. |
| Cardinality | 1 |
| Default | |
| Sample | |
| Comments | |

2.1.2.1.3.9 Field startdate**2.1.2.1.3.9.1 startdate Tree Diagram****2.1.2.1.3.9.2 startdate properties**

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | startdate |
| Technical name | |
| Activated | true |
| Id | |
| Type | date |
| Description | |
| Dependencies | |
| Required | |
| Primary key | false |
| Foreign collection | project |
| Foreign field | startdate |
| Relationship type | Foreign Key |
| Relationship name | fk project. to developer. |
| Cardinality | 1 |
| Default | |
| Now | |
| Sample | |
| Comments | |

2.1.2.1.3.10 Field enddate**2.1.2.1.3.10.1 enddate Tree Diagram****2.1.2.1.3.10.2 enddate properties**

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | enddate |
| Technical name | |
| Activated | true |
| Id | |
| Type | date |
| Description | |
| Dependencies | |
| Required | |
| Primary key | false |
| Foreign collection | project |
| Foreign field | enddate |
| Relationship type | Foreign Key |
| Relationship name | fk project. to developer. |
| Cardinality | 1 |
| Default | |
| Now | |
| Sample | |
| Comments | |

2.1.2.1.4 developer Definitions**2.1.2.1.4.1 Field New Field****2.1.2.1.4.1.1 New Field Tree Diagram**

2.1.2.1.4.1.2 New Field properties

| PROPERTY | VALUE |
|--------------------|-----------|
| Name | New Field |
| Technical name | |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Sample | |
| Comments | |

2.1.2.1.4.2 Field projectname

2.1.2.1.4.2.1 projectname Tree Diagram



2.1.2.1.4.2.2 projectname properties

| PROPERTY | VALUE |
|--------------------|-------------|
| Name | projectname |
| Technical name | |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Sample | |
| Comments | |

2.1.2.1.5 developer JSON Schema

```

{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "title": "developer",
  "properties": {
    "_id": {
      "type": "string",
      "pattern": "^[a-zA-F0-9]{24}$"
    },
    "name": {
      "type": "string"
    },
    "stacks": {
      "type": "array",
      "additionalItems": true,
      "items": {
        "$ref": "#/definitions/New Field"
      }
    },
    "projects": {
      "type": "array",
      "additionalItems": true,
      "items": {
        "type": "object",
        "properties": {
          "projectname": {
            "type": "array",
            "additionalItems": true,
            "items": {
              "type": "string",
              "pattern": "^[a-zA-F0-9]{24}$"
            }
          },
          "startdate": {
            "type": "string",
            "format": "date-time"
          },
          "enddate": {
            "type": "string",
            "format": "date-time"
          }
        }
      }
    },
    "definitions": {
      "New Field": {
        "type": "string",
        "pattern": "^[a-zA-F0-9]{24}$"
      },
      "projectname": {
        "type": "string",

```

```

    "pattern": "^a-fA-F0-9{24}$"
  }
},
"required": [
  "_id",
  "name"
]
}

```

2.1.2.1.6 developer JSON data

```

{
  "_id": ObjectId("507f1f77bcf86cd799439011"),
  "name": "Lorem",
  "stacks": [
    ObjectId("507f1f77bcf86cd799439011")
  ],
  "projects": [
    {
      "projectname": [
        ObjectId("507f1f77bcf86cd799439011")
      ],
      "startdate": ISODate("2016-04-08T15:06:21.595Z"),
      "enddate": ISODate("2016-04-08T15:06:21.595Z")
    }
  ]
}

```

2.1.2.1.7 developer Target Script

```

use Project_Management;

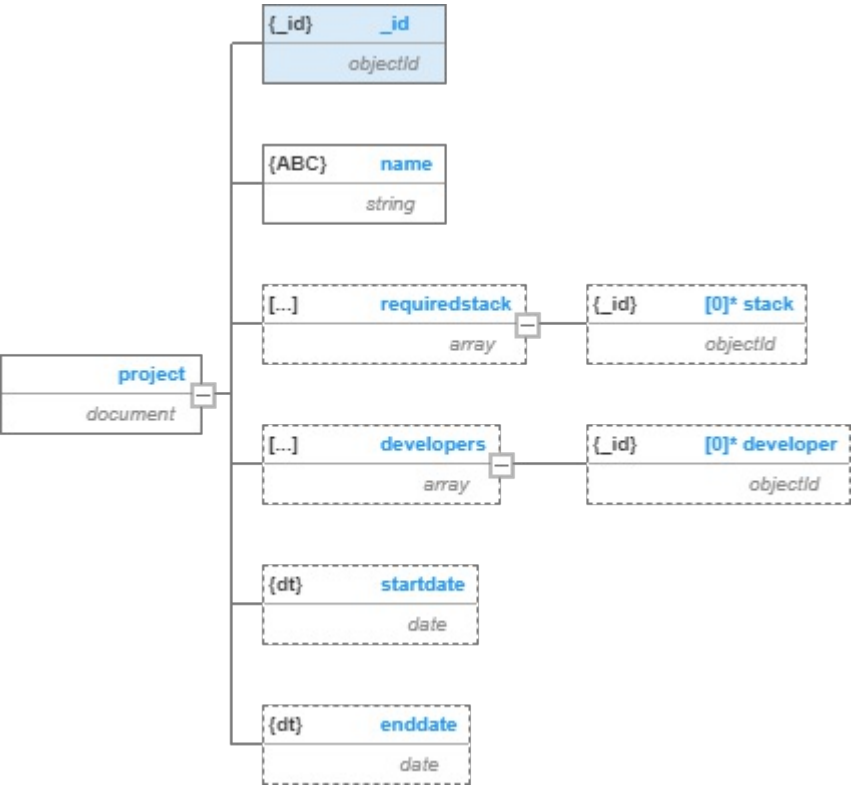
db.createCollection("developer", {
  "storageEngine": {
    "wiredTiger": {}
  },
  "capped": false,
  "validator": {
    "$jsonSchema": {
      "bsonType": "object",
      "title": "developer",
      "properties": {
        "_id": {
          "bsonType": "objectId"
        },
        "name": {
          "bsonType": "string"
        }
      }
    }
  }
}

```

```
    },
    "stacks": {
      "bsonType": "array",
      "additionalItems": true,
      "items": {
        "bsonType": "objectId"
      }
    },
    "projects": {
      "bsonType": "array",
      "additionalItems": true,
      "items": {
        "bsonType": "object",
        "properties": {
          "projectname": {
            "bsonType": "array",
            "additionalItems": true,
            "items": {
              "bsonType": "objectId"
            }
          },
          "startdate": {
            "bsonType": "date"
          },
          "enddate": {
            "bsonType": "date"
          }
        }
      }
    },
    "required": [
      "_id",
      "name"
    ]
  },
  "validationLevel": "off",
  "validationAction": "warn"
});
```

2.1.2.2 Collection project

2.1.2.2.1 project Tree Diagram



2.1.2.2.2 project Properties

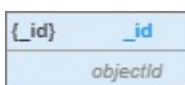
| PROPERTY | VALUE |
|-----------------------|--------------------|
| Collection name | project |
| Technical name | |
| Activated | true |
| Id | |
| Description | |
| Database | Project_Management |
| Capped | |
| Size | |
| Max | |
| Storage engine | WiredTiger |
| Config String | |
| Validation level | Off |
| Validation action | Warn |
| Additional properties | |
| Comments | |

2.1.2.2.3 project Fields

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|---------------|----------|-------|-----|-------------|----------|
| _id | objectId | true | | | |
| name | string | true | dk | | |
| requiredstack | array | false | | | |
| [0] stack | objectId | false | fk | | |
| developers | array | false | | | |
| [0] developer | objectId | false | fk | | |
| startdate | date | false | dk | | |
| enddate | date | false | dk | | |

2.1.2.2.3.1 Field _id

2.1.2.2.3.1.1 _id Tree Diagram



2.1.2.2.3.1.2 _id properties

| PROPERTY | VALUE |
|--------------------|----------|
| Name | _id |
| Technical name | |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | true |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Sample | |
| Comments | |

2.1.2.2.3.2 Field name

2.1.2.2.3.2.1 name Tree Diagram

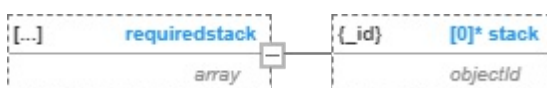


2.1.2.2.3.2.2 name properties

| PROPERTY | VALUE |
|--------------------|--------|
| Name | name |
| Technical name | |
| Activated | true |
| Id | |
| Type | string |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Min length | |
| Max length | |
| Pattern | |
| Format | |
| Enum | |
| Sample | |
| Comments | |

2.1.2.2.3.3 Field requiredstack

2.1.2.2.3.3.1 requiredstack Tree Diagram



2.1.2.2.3.3.2 requiredstack Hierarchy

Parent field: **project**

Child field(s):

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-----------|----------|-------|-----|-------------|----------|
| [0] stack | objectId | false | | | |

2.1.2.2.3.3.3 requiredstack properties

| PROPERTY | VALUE |
|--------------------|---------------|
| Name | requiredstack |
| Technical name | |
| Activated | true |
| Id | |
| Type | array |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Min items | |
| Max items | |
| Unique items | |
| Additional items | true |
| Comments | |

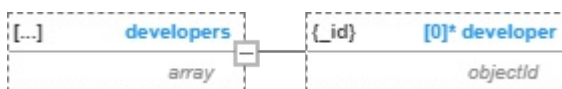
2.1.2.2.3.4 Field [0] stack**2.1.2.2.3.4.1 [0] stack Tree Diagram**

2.1.2.2.3.4.2 [0] stack properties

| PROPERTY | VALUE |
|--------------------|-----------------------|
| Display name | stack |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Primary key | |
| Foreign collection | stack |
| Foreign field | name |
| Relationship type | Foreign Key |
| Relationship name | fk stack. to project. |
| Cardinality | 1..n |
| Default | |
| Sample | |
| Comments | |

2.1.2.2.3.5 Field developers

2.1.2.2.3.5.1 developers Tree Diagram



2.1.2.2.3.5.2 developers Hierarchy

Parent field: **project**

Child field(s):

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|---------------|----------|-------|-----|-------------|----------|
| [0] developer | objectId | false | | | |

2.1.2.2.3.5.3 developers properties

| PROPERTY | VALUE |
|--------------------|------------|
| Name | developers |
| Technical name | |
| Activated | true |
| Id | |
| Type | array |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Min items | |
| Max items | |
| Unique items | |
| Additional items | true |
| Comments | |

2.1.2.2.3.6 Field [0] developer

2.1.2.2.3.6.1 [0] developer Tree Diagram



2.1.2.2.3.6.2 [0] developer properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Display name | developer |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Primary key | |
| Foreign collection | developer |
| Foreign field | name |
| Relationship type | Foreign Key |
| Relationship name | fk developer. to project. |
| Cardinality | 1..n |
| Default | |
| Sample | |
| Comments | |

2.1.2.2.3.7 Field startdate

2.1.2.2.3.7.1 startdate Tree Diagram



2.1.2.2.3.7.2 startdate properties

| PROPERTY | VALUE |
|--------------------|-----------|
| Name | startdate |
| Technical name | |
| Activated | true |
| Id | |
| Type | date |
| Description | |
| Dependencies | |
| Required | |
| Primary key | false |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Now | |
| Sample | |
| Comments | |

2.1.2.2.3.8 Field enddate

2.1.2.2.3.8.1 enddate Tree Diagram



2.1.2.2.3.8.2 enddate properties

| PROPERTY | VALUE |
|--------------------|---------|
| Name | enddate |
| Technical name | |
| Activated | true |
| Id | |
| Type | date |
| Description | |
| Dependencies | |
| Required | |
| Primary key | false |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Now | |
| Sample | |
| Comments | |

2.1.2.2.4 project JSON Schema


```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "title": "project",
  "properties": {
    "_id": {
      "type": "string",
      "pattern": "^[a-zA-F0-9]{24}$"
    },
    "name": {
      "type": "string"
    },
    "requiredstack": {
      "type": "array",
      "additionalItems": true,
      "items": {
        "type": "string",
        "pattern": "^[a-zA-F0-9]{24}$"
      }
    },
    "developers": {
      "type": "array",
      "additionalItems": true,
      "items": {
        "type": "string",
        "pattern": "^[a-zA-F0-9]{24}$"
      }
    },
    "startdate": {
      "type": "string",
      "format": "date-time"
    },
    "enddate": {
      "type": "string",
      "format": "date-time"
    }
  },
  "required": [
    "_id",
    "name"
  ]
}
```

2.1.2.2.5 project JSON data

```
{
  "_id": ObjectId("507f1f77bcf86cd799439011"),
  "name": "Lorem",
  "requiredstack": [
    ObjectId("507f1f77bcf86cd799439011")
  ],
  "developers": [
    ObjectId("507f1f77bcf86cd799439011")
  ],
  "startdate": ISODate("2016-04-08T15:06:21.595Z"),
  "enddate": ISODate("2016-04-08T15:06:21.595Z")
}
```

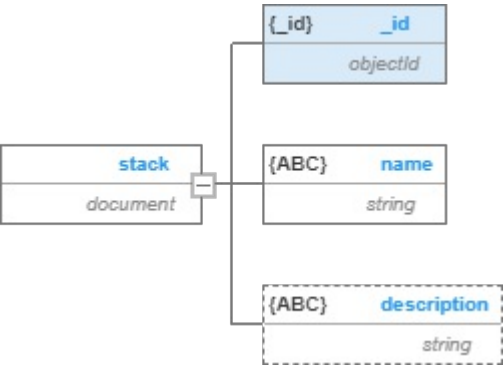
2.1.2.2.6 project Target Script

```
use Project_Management;

db.createCollection("project", {
  "storageEngine": {
    "wiredTiger": {}
  },
  "capped": false,
  "validator": {
    "$jsonSchema": {
      "bsonType": "object",
      "title": "project",
      "properties": {
        "_id": {
          "bsonType": "objectId"
        },
        "name": {
          "bsonType": "string"
        },
        "requiredstack": {
          "bsonType": "array",
          "additionalItems": true,
          "items": {
            "bsonType": "objectId"
          }
        },
        "developers": {
          "bsonType": "array",
          "additionalItems": true,
          "items": {
            "bsonType": "objectId"
          }
        },
        "startdate": {
          "bsonType": "date"
        },
        "enddate": {
          "bsonType": "date"
        }
      },
      "required": [
        "_id",
        "name"
      ]
    }
  },
  "validationLevel": "off",
  "validationAction": "warn"
});
```

2.1.2.3 Collection stack

2.1.2.3.1 stack Tree Diagram



2.1.2.3.2 stack Properties

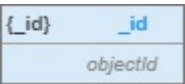
| PROPERTY | VALUE |
|-----------------------|--------------------|
| Collection name | stack |
| Technical name | |
| Activated | true |
| Id | |
| Description | |
| Database | Project_Management |
| Capped | |
| Size | |
| Max | |
| Storage engine | WiredTiger |
| Config String | |
| Validation level | Off |
| Validation action | Warn |
| Additional properties | |
| Comments | |

2.1.2.3.3 stack Fields

| FIELD | TYPE | REQ | KEY | DESCRIPTION | COMMENTS |
|-------------|----------|-------|-----|-------------|----------|
| _id | objectId | true | | | |
| name | string | true | dk | | |
| description | string | false | | | |

2.1.2.3.3.1 Field _id

2.1.2.3.3.1.1 _id Tree Diagram



2.1.2.3.3.1.2 _id properties

| PROPERTY | VALUE |
|--------------------|-----------|
| Name | _id |
| Technical name | |
| Activated | true |
| Id | |
| Type | objectId |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | true |
| Foreign collection | developer |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Sample | |
| Comments | |

2.1.2.3.3.2 Field name**2.1.2.3.3.2.1 name Tree Diagram**

| | |
|-------|--------|
| {ABC} | name |
| | string |

2.1.2.3.3.2 name properties

| PROPERTY | VALUE |
|--------------------|------------|
| Name | name |
| Technical name | |
| Activated | true |
| Id | |
| Type | string |
| Description | |
| Dependencies | |
| Required | true |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Min length | |
| Max length | |
| Pattern | |
| Format | |
| Enum | |
| Sample | JavaScript |
| Comments | |

2.1.2.3.3.3 Field description**2.1.2.3.3.3.1 description Tree Diagram**

2.1.2.3.3.2 description properties

| PROPERTY | VALUE |
|--------------------|-------------|
| Name | description |
| Technical name | |
| Activated | true |
| Id | |
| Type | string |
| Description | |
| Dependencies | |
| Required | |
| Primary key | |
| Foreign collection | |
| Foreign field | |
| Relationship type | |
| Relationship name | |
| Cardinality | |
| Default | |
| Min length | |
| Max length | |
| Pattern | |
| Format | |
| Enum | |
| Sample | |
| Comments | |

2.1.2.3.4 stack JSON Schema

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "title": "stack",
  "properties": {
    "_id": {
      "type": "string",
      "pattern": "^[a-zA-F0-9]{24}$"
    },
    "name": {
      "type": "string"
    },
    "description": {
      "type": "string"
    }
  },
  "required": [
    "_id",
    "name"
  ]
}
```

2.1.2.3.5 stack JSON data

```
{
  "_id": ObjectId("507f1f77bcf86cd799439011"),
  "name": "JavaScript",
  "description": "Lorem"
}
```

2.1.2.3.6 stack Target Script

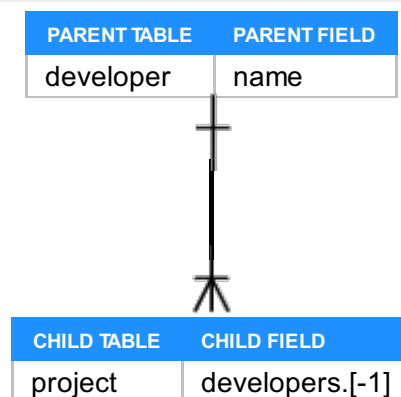

```
use Project_Management;

db.createCollection("stack", {
  "storageEngine": {
    "wiredTiger": {}
  },
  "capped": false,
  "validator": {
    "$jsonSchema": {
      "bsonType": "object",
      "title": "stack",
      "properties": {
        "_id": {
          "bsonType": "objectId"
        },
        "name": {
          "bsonType": "string"
        },
        "description": {
          "bsonType": "string"
        }
      }
    },
    "required": [
      "_id",
      "name"
    ]
  },
  "validationLevel": "off",
  "validationAction": "warn"
});
```

3. RELATIONSHIPS

3.1 Relationship fk developer. to project.

3.1.1 fk developer. to project. Diagram

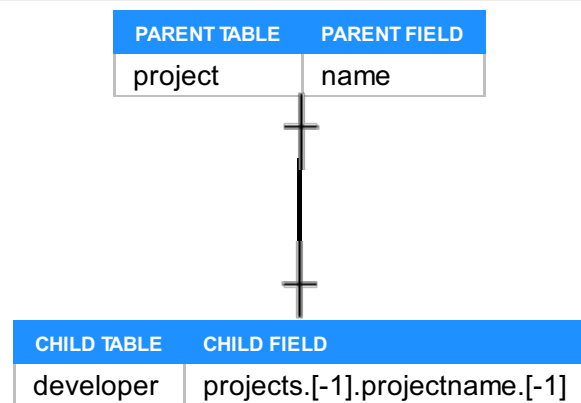


3.1.2 fk developer. to project. Properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | fk developer. to project. |
| Description | |
| Parent Collection | developer |
| Parent field | name |
| Parent Cardinality | 1 |
| Child Collection | project |
| Child field | |
| Child Cardinality | 1..n |
| Comments | |

3.2 Relationship fk project. to developer.

3.2.1 fk project. to developer. Diagram

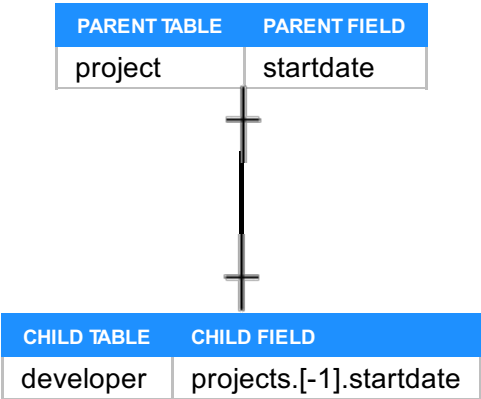


3.2.2 fk project. to developer. Properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | fk project. to developer. |
| Description | |
| Parent Collection | project |
| Parent field | name |
| Parent Cardinality | 1 |
| Child Collection | developer |
| Child field | |
| Child Cardinality | 1 |
| Comments | |

3.3 Relationship fk project. to developer.

3.3.1 fk project. to developer. Diagram

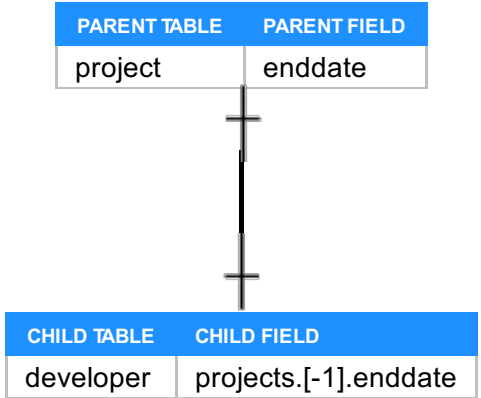


3.3.2 fk project. to developer. Properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | fk project. to developer. |
| Description | |
| Parent Collection | project |
| Parent field | startdate |
| Parent Cardinality | 1 |
| Child Collection | developer |
| Child field | startdate |
| Child Cardinality | 1 |
| Comments | |

3.4 Relationship fk project. to developer.

3.4.1 fk project. to developer. Diagram

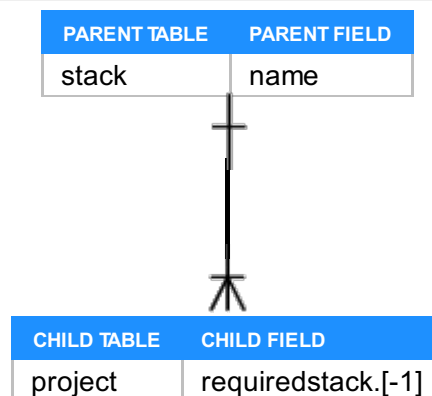


3.4.2 fk project. to developer. Properties

| PROPERTY | VALUE |
|--------------------|---------------------------|
| Name | fk project. to developer. |
| Description | |
| Parent Collection | project |
| Parent field | enddate |
| Parent Cardinality | 1 |
| Child Collection | developer |
| Child field | enddate |
| Child Cardinality | 1 |
| Comments | |

3.5 Relationship fk stack. to project.

3.5.1 fk stack. to project. Diagram

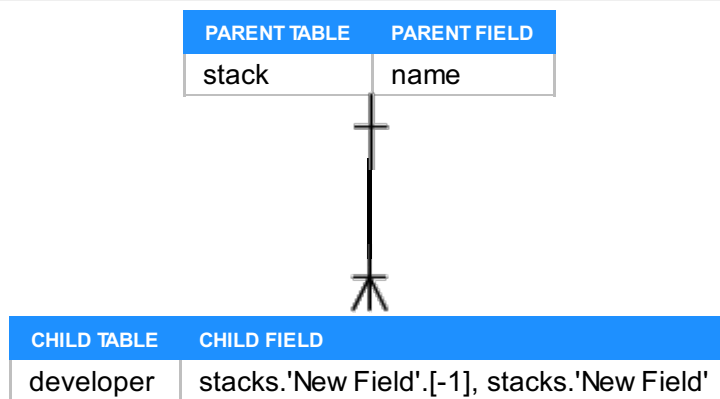


3.5.2 fk stack. to project. Properties

| PROPERTY | VALUE |
|--------------------|-----------------------|
| Name | fk stack. to project. |
| Description | |
| Parent Collection | stack |
| Parent field | name |
| Parent Cardinality | 1 |
| Child Collection | project |
| Child field | |
| Child Cardinality | 1..n |
| Comments | |

3.6 Relationship fk stacks. to developer.

3.6.1 fk stacks. to developer. Diagram



3.6.2 fk stacks. to developer. Properties

| PROPERTY | VALUE |
|--------------------|--------------------------|
| Name | fk stacks. to developer. |
| Description | |
| Parent Collection | stack |
| Parent field | name |
| Parent Cardinality | 1 |
| Child Collection | developer |
| Child field | , New Field |
| Child Cardinality | 1..n |
| Comments | |