

# ShiftHub Document Database Design

By William Greenlaw

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*The ShiftHub application will utilize a document database design, such as MongoDB, so that it can easily be modified/tailored to meet the specific needs of an organization and operate more efficiently at scale.*

*The document database will consist of three different types of documents: user documents, schedule documents, and shift documents. Each user document will contain information about the user, including their availability. Each schedule document will contain a unique schedule ID and multiple shift IDs so that multiple schedules and schedule views can be created (i.e., different schedules or schedule views for different locations, departments, etc.). Each shift document will contain a unique shift ID so that multiple shifts can be created. In summary, there can be multiple schedules. Each schedule can contain multiple shifts. Each shift can contain one employee (i.e., the employee assigned to that shift).*

## User document:

```
{
  "employeeID": 12345,
  "emailAddress": "johndoe@gmail.com",
  "passwordHash": "Q'rXygWn1UGg80T",
  "userType": "Employee",
  "firstName": "John",
  "lastName": "Doe",
  "position": "Help Desk Associate",
  "department": "Customer Service",
  "status": "Full Time",
  "availability": [
    {"dayOfWeek": "Monday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
    {"dayOfWeek": "Tuesday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
    {"dayOfWeek": "Wednesday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
    {"dayOfWeek": "Thursday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
  ]
}
```

```
    {"dayOfWeek": "Friday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
    {"dayOfWeek": "Saturday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
    {"dayOfWeek": "Sunday", "startTime": "9:00 AM", "endTime": "5:00 PM"},
  ]
}
```

## Schedule document:

```
{
  "scheduleID": 12345,
  "shifts": [
    {"shiftID": 12345},
    {"shiftID": 12346},
    {"shiftID": 12347}
  ]
}
```

## Shift document:

```
{
  "shiftID": 12345,
  "employeeID": 12345,
  "startDate": "2019-01-02",
  "startTime": "9:00 AM",
  "endDate": "2019-01-02",
  "endTime": "5:00 PM",
  "lunchBreak": true,
  "lunchBreakDuration": 0.75,
  "notes": null
}
```