Members:

db.Members.insertOne({

memberID:’123231’,

name:’Dan One’,

DOB:'18, 04, 2002',

contactInformation: {

phone: '0984333767',

email: 'dan@gmail.com'

},

MedicalConditions:'NA',

MembershipPlan:{

membershipPlanID: '274',

Name:'student2022',

length:'1 year',

cost:'200'

}})

db.Members.insertOne({

memberID: '789012',

name: 'Liam Johnson',

DOB: '08, 07, 1985',

contactInformation: {

phone: '0765432198',

email: 'liam.johnson@hotmail.com'

},

MedicalConditions: 'Diabetes',

MembershipPlan: {

membershipPlanID: '678',

Name: 'premium',

length: '2 years',

cost: '400'

}

})

db.Members.insertOne({

memberID: '234567',

name: 'Olivia Garcia',

DOB: '01, 01, 2000',

contactInformation: {

phone: '0678901234',

email: 'olivia.garcia@yahoo.com'

},

MedicalConditions: 'NA',

MembershipPlan: {

membershipPlanID: '901',

Name: 'family',

length: '1 year',

cost: '300'

}

})

db.Members.insertOne({

memberID: '345678',

name: 'Noah Martinez',

DOB: '12, 06, 1998',

contactInformation: {

phone: '0543219876',

email: 'noah.martinez@gmail.com'

},

MedicalConditions: 'NA',

MembershipPlan: {

membershipPlanID: '123',

Name: 'student2023',

length: '1 year',

cost: '250'

}

})

db.Members.insertOne({

memberID: '456789',

name: 'Sophia Brown',

DOB: '09, 02, 1996',

contactInformation: {

phone: '0765432109',

email: 'sophia.brown@hotmail.com'

},

MedicalConditions: 'Allergies',

MembershipPlan: {

membershipPlanID: '456',

Name: 'premium plus',

length: '3 years',

cost: '800'

}

})

Trainers:

db.Trainer.insertOne({

trainerID: '1332',

name: 'Bob Dylan',

specialization: 'Men recomp',

experience: '10 years',

contactInformation: {

phone: '0874565234',

email: 'bobd123@gmail.com'

},

availabilitySchedule: 'mon-fri, 6-9'

})

db.Trainer.insertOne({

trainerID: '2456',

name: 'Jane Smith',

specialization: 'Strength training',

experience: '5 years',

contactInformation: {

phone: '0789567342',

email: 'janesmithfit@gmail.com'

},

availabilitySchedule: 'mon-wed, 2-6'

})

db.Trainer.insertOne({

trainerID: '7890',

name: 'Alex Rodriguez',

specialization: 'Functional training',

experience: '8 years',

contactInformation: {

phone: '0765432987',

email: 'arodfit@yahoo.com'

},

availabilitySchedule: 'tue-thu, 8-12'

})

db.Trainer.insertOne({

trainerID: '1234',

name: 'Maria Martinez',

specialization: 'Yoga',

experience: '3 years',

contactInformation: {

phone: '0654321789',

email: 'mariayoga@gmail.com'

},

availabilitySchedule: 'mon-fri, 7-11'

})

db.Trainer.insertOne({

trainerID: '5678',

name: 'John Lee',

specialization: 'Boxing',

experience: '6 years',

contactInformation: {

phone: '0987654321',

email: 'johnleefit@hotmail.com'

},

availabilitySchedule: 'wed-sat, 4-8'

})

db.Trainer.insertOne({

trainerID: '9012',

name: 'Samantha Brown',

specialization: 'Cardio',

experience: '2 years',

contactInformation: {

phone: '0765432198',

email: 'samanthabfit@gmail.com'

},

availabilitySchedule: 'mon-thu, 3-7'

})

Equipment:

db.Equipment.insertOne({

equipmentID:'675422',

equipmentName:'wide chest press',

description:'low press, 80kg max',

condition:'perfect',

location:'1st floor, 1st room, left corner',

maintenceHistory:'due june 23'

})

db.Equipment.insertOne({

equipmentID: '345687',

equipmentName: 'dumbbell set',

description: '5-50 lbs set',

condition: 'good',

location: '2nd floor, weightlifting area',

maintenceHistory: 'due september 23'

})

db.Equipment.insertOne({

equipmentID: '891234',

equipmentName: 'treadmill',

description: 'commercial grade',

condition: 'excellent',

location: '1st floor, cardio area',

maintenceHistory: 'due december 23'

})

db.Equipment.insertOne({

equipmentID: '456789',

equipmentName: 'rowing machine',

description: 'water resistance',

condition: 'fair',

location: '2nd floor, cardio area',

maintenceHistory: 'due july 23'

})

db.Equipment.insertOne({

equipmentID: '012345',

equipmentName: 'leg press machine',

description: 'plate loaded',

condition: 'good',

location: '1st floor, weightlifting area',

maintenceHistory: 'due october 23'

})

db.Equipment.insertOne({

equipmentID: '678912',

equipmentName: 'elliptical machine',

description: 'full body workout',

condition: 'excellent',

location: '1st floor, cardio area',

maintenceHistory: 'due november 23'

})

WorkoutPlan:

db.WorkoutPlan.insertOne({

workoutID:'322',

workoutName:'couple push',

description:'chest, shoulder, tricep',

level:'beginner, intermediate',

personToPersonRatio:[

{oneToOne:'no',

oneToTwo:'yes',

oneToThree:'no',

oneToFour:'yes',

oneToFive:'no',

}]})

db.WorkoutPlan.insertOne({

workoutID: '867',

workoutName: 'Full Body HIIT',

description: 'High intensity interval training',

level: 'Intermediate, Advanced',

personToPersonRatio: [

{ oneToOne: 'yes',

oneToTwo: 'no',

oneToThree: 'no',

oneToFour: 'no',

oneToFive: 'no'

}]

})

db.WorkoutPlan.insertOne({

workoutID: '420',

workoutName: 'Yoga for Flexibility',

description: 'A gentle yoga practice for stretching and relaxation',

level: 'Beginner',

personToPersonRatio: [

{ oneToOne: 'yes',

oneToTwo: 'yes',

oneToThree: 'no',

oneToFour: 'no',

oneToFive: 'no'

}]

})

db.WorkoutPlan.insertOne({

workoutID: '999',

workoutName: 'Pilates for Core Strength',

description: 'A low-impact workout for building core strength and flexibility',

level: 'Intermediate',

personToPersonRatio: [

{ oneToOne: 'no',

oneToTwo: 'yes',

oneToThree: 'yes',

oneToFour: 'no',

oneToFive: 'no'

}]

})

db.WorkoutPlan.insertOne({

workoutID: '555',

workoutName: 'Cardio Bootcamp',

description: 'A high-energy workout combining cardio and strength training',

level: 'Intermediate, Advanced',

personToPersonRatio: [

{ oneToOne: 'no',

oneToTwo: 'no',

oneToThree: 'yes',

oneToFour: 'yes',

oneToFive: 'no'

}]

})

db.WorkoutPlan.insertOne({

workoutID: '123',

workoutName: 'Barre for Toning',

description: 'A ballet-inspired workout for toning and sculpting',

level: 'Beginner, Intermediate',

personToPersonRatio: [

{ oneToOne: 'yes',

oneToTwo: 'yes',

oneToThree: 'yes',

oneToFour: 'no',

oneToFive: 'no'

}]

})

db.Equipment.updateOne(

{ equipmentID: '675422' },

{

$set: {

equipmentName: 'wide chest press',

description: 'low press, 100kg max',

condition: 'perfect',

location: '1st floor, 2nd room, right corner',

maintenceHistory: 'due june 23'

}})

db.Equipment.updateOne({

equipmentID:'675422'}

{

$set:{

equipmentID:'675422'

equipmentName:'wide chest press',

description:'low press, 100kg max',

condition:'perfect',

location:'1st floor, 2nd room, right corner',

maintenceHistory:'due june 23'

}})

db.Members.deleteOne({

DOB: '18, 04, 2002',

gender: 'male',

contactInformation: 'ph:0984333767, email: dan@gmail.com',

medicalCondition: 'NA',

MembershipPlan: [{

membershipPlanID: '274',

name: 'student2022',

length: '1 year',

cost: '200'

}]})

db.Trainer.find({

trainerID: 1332

})

.pretty()

Aggregation:

db.WorkoutPlan.aggregate([

{ $match: { workoutID: "123" } }

])

db.Members.aggregate([

{ $project: { name: 1, "contactInformation.email": 1 } }

])

db.Trainer.aggregate([

{

$match: {

experience: { $gt: "5 years" }

}

},

{

$count: "experiencedTrainers"

}

])

db.Members.aggregate([

{

$sample: { size: 1 }

}

])

db.Equipment.aggregate([

{

$group: {

\_id: "$location",

totalEquipment: { $sum: 1 }

}

}

])