Database Seed Script:

```
1   # This file should contain all the record creation needed to seed the database with its default values.
2   # The data can then be loaded with the rails db:seed command (or created alongside the database with db:setup).
3
4   # Seeds for the user database.
5   # Currently seeds one admin (Admin has two interviews)
6   # Seeds 5 completely random teachers (Each teacher has a random number of availabilities and skills)
7   # Seeds 20 completely random students (Each student has a random number of preferences and free play room bookings)
8
9   instrumentsAvailable = ["Guitar", "Drums", "Bass", "Claranet", "Vocal"]
10  languagesAvailable = ["English", "Spanish", "Mandarin", "French", "Russian"]
11  daysOpen = ["Monday", "Tuesday", "Wednesday", "Thursday", "Friday"]
12
13  user = User.create!(name:  "Mika",
14                  last_name: "Williams",
15                  dob: "11/09/1972",
16                  gender: "Other",
17                  email: "test@test.org",
18                  facebook_ID: "www.facebook.com/mika_music",
19                  address: "22 Queen St, Brisbane, QLD, 4000",
20                  password:          "password",
21                  password_confirmation: "password",
22                  teacher_qualifications: "Graduate of Drama studies and Bachelor in Arts",
23                  admin: true)
24
25  Interview.create!(user_email: user.email,
26                      user_id: user.id,
27                      teacher_email: "teacher1@teacher.org",
28                      date: "12/11/2016",
29                      time: "11:30",
30                      duration: "2")
31  Interview.create!(user_email: user.email,
32                      user_id: user.id,
33                      teacher_email: "teacher4@teacher.org",
34                      date: "13/11/2016",
35                      time: "09:30",
36                      duration: "1.5")
37
```

Figure 4. Final Database Seed Script for generating random data

```
38  # 5 Teachers
39  5.times do |n|
40
41      # Variables for the user table of teacher
42      name  = Faker::Name.first_name
43      last_name = Faker::Name.last_name
44      dob = "#{Faker::Number.between(1, 30)}/#{Faker::Number.between(1, 12)}/#{Faker::Number.between(1950, 1995)}"
45      isMale = Faker::Boolean.boolean
46      if isMale == false
47        gender = "Male"
48      else
49        gender = "Female"
50      end
51      address = "#{Faker::Address.street_address(false)}, QLD"
52      email = "teacher-#{n+1}@teacher.org"
53      facebook_ID = "www.facebook.com/#{name}#{last_name}"
54      teacher_qualifications = "Graduated #{Faker::University.name}"
55      password = "password"
56      user_recieve_emails = Faker::Boolean.boolean
57      teacher = true
58      admin = false
59      day = "" #Needed to be predefined for some reason
60
61      # How many availabilities or skills does each teacher have?
62      numAvailabilities = Faker::Number.between(1, 4)
63      numSkills = Faker::Number.between(1, 2)
64
```

Figure 5. Final Database Seed Script for generating random data

```
65      # Assignment
66      user = User.create!(name:  name,
67                          last_name: last_name,
68                          email: email,
69                          address: address,
70                          dob: dob,
71                          gender: gender,
72                          facebook_ID: facebook_ID,
73                          teacher_qualifications: teacher_qualifications,
74                          user_recieve_emails: user_recieve_emails,
75                          password:         password,
76                          password_confirmation: password,
77                          teacher: teacher,
78                          admin: admin)
79
80      numAvailabilities.times do |a|
81        # Variables for the Availability table of teacher
82        day = daysOpen[Faker::Number.between(0, 4)]
83        time = "#{Faker::Number.between(10, 20)}:#{Faker::Number.between(10, 59)}"
84        duration = Faker::Number.between(1, 5)
85
86        Availability.create!(user_email: user.email,
87                             user_id: user.id,
88                             day: day,
89                             time: time,
90                             duration: duration)
91      end
92
93      numSkills.times do |b|
94        # Variables for the Skills table of teacher
95        instrument = instrumentsAvailable[Faker::Number.between(0, 4)]
96        instrument_skill = "#{Faker::Number.between(1, 5)}.#{Faker::Number.between(1, 9)}"
97        language = languagesAvailable[Faker::Number.between(0, 4)]
98        language_skill = "#{Faker::Number.between(1, 5)}.#{Faker::Number.between(1, 9)}"
99
100       Skill.create!(user_email: user.email,
101                     user_id: user.id,
102                     instrument: instrument,
103                     instrument_skill: instrument_skill,
104                     language: language,
105                     language_skill: language_skill)
106     end
107   end
108
```

Figure 6. Final Database Seed Script for generating random data

```
109   # 20 Students
110   20.times do |n|
111     # Variables for the user table for students
112     name  = Faker::Name.first_name
113     last_name = Faker::Name.last_name
114     yearOfBirth = Faker::Number.between(1980, 2010)
115     dob = "#{Faker::Number.between(1, 30)}/#{Faker::Number.between(1, 12)}/#{yearOfBirth}"
116     address = "#{Faker::Address.street_address(false)}, QLD"
117
118     if Faker::Boolean.boolean
119       facebook_ID = "www.facebook.com/#{name}#{last_name}"
120     end
121
122     if Faker::Boolean.boolean
123       gender = "Male"
124     else
125       gender = "Female"
126     end
127
128     if yearOfBirth >= 1998
129       parent_name = Faker::Name.first_name
130       parent_email = "#{name}#{last_name}@parent.com"
131       parent_moblie = Faker::PhoneNumber.phone_number
132       parent_recieve_emails = Faker::Boolean.boolean
133     else
134       parent_name = "NA"
135       parent_email = "NA"
136       parent_moblie = "NA"
137       parent_recieve_emails = false
138     end
139
140     user_recieve_emails = Faker::Boolean.boolean
141     email = "student-#{n+1}@student.org"
142     password = "password"
143     teacher = false
144     admin = false
145
146     numFreePlayRoomSessions = Faker::Number.between(1, 4)
147     numPreferences = Faker::Number.between(1, 2)
148
```

Figure 7. Final Database Seed Script for generating random data

```
149    #Start Assignment
150    user = User.create!(name:  name,
151                email: email,
152                last_name: last_name,
153                dob: dob,
154                gender: gender,
155                address: address,
156                facebook_ID: facebook_ID,
157                password:           password,
158                password_confirmation: password,
159                parent_name: parent_name,
160                parent_email: parent_email,
161                parent_moblie: parent_moblie,
162                user_recieve_emails: user_recieve_emails,
163                parent_recieve_emails: parent_recieve_emails,
164                teacher: teacher,
165                admin: admin)
166    numFreePlayRoomSessions.times do |a|
167        # Variables for the freePlayRoom table of students
168        date = "#{Faker::Number.between(1, 30)}/#{Faker::Number.between(1, 12)}/2017"
169        time = "#{Faker::Number.between(10, 20)}:#{Faker::Number.between(10, 59)}"
170        duration = Faker::Number.between(1, 5)
171
172        FreePlayRoom.create!(user_email: user.email,
173                    user_id: user.id,
174                    date: date,
175                    time: time,
176                    duration: duration)
177    end
178    numPreferences.times do |b|
179        # Variables for the preferences table of students
180        preferred_day = daysOpen[Faker::Number.between(0, 4)]
181        preferred_time = "#{Faker::Number.between(10, 20)}:#{Faker::Number.between(10, 59)}"
182        instrument = instrumentsAvailable[Faker::Number.between(0, 4)]
183        preferred_teacher_language = languagesAvailable[Faker::Number.between(0, 4)]
184        genderDecider = Faker::Number.between(1, 3)
185        if genderDecider == 1
186            preferred_teacher_gender = "Male"
187        elsif genderDecider == 2
188            preferred_teacher_gender = "Female"
189        else
190            preferred_teacher_gender = "None"
191        end
192
193        Preference.create!(user_email: user.email,
194                    user_id: user.id,
195                    preferred_day: preferred_day,
196                    preferred_time: preferred_time,
197                    instrument: instrument,
198                    preferred_teacher_language: preferred_teacher_language,
199                    preferred_teacher_gender: preferred_teacher_gender)
200    end
```

Figure 8. Final Database Seed Script for generating random data

The above figures show the script used to seed the database and generate the sudo random test data for the website. All this code can be found in the db folder in the seed file. To generate the sudo random variables a ruby gem called faker was installed and bundled into the development environment. Thus the variables generated are children of the Faker object. Starting from the very top of the script I first define 5 different types for Instruments, days open and languages spoken. These variables were not available in faker.

The first user created is the admin, as defined by the client team, the admin is Mika Williams who is a female born in the year 1972. Her Facebook page part of her user entry. After the admin is created, two interviews are created as part of her user_id. At this stage in development (17th October), the admin, her interviews, # teachers, # students, emails and the passwords for all users are the only non-random entries in the database. This was decided for both testing purposes and ease for client team viewing the website from the perspective of multiple users.

Five teachers are then generated. Every variable for each teacher is relative random (as random as faker actually is) except for the teacher Boolean as expected. Each teacher also has a random number of availabilities and skills associated with them. Each skill and availabilities is also completely randomly generated. After the generation of the teachers, 20 students are seeded. 20 was the number agreed upon between our team and the client team as being a decent representation. Students follow the same patern as the teachers however, if the year of their birth is after 1998, random parent is also seeded into their entry. Additionally, sometimes a student will have a facebook_ID and some will not.

Generated Data in Database:

	id	name	email	created_at	ate	password_digest	last_name	gender	dob	icet
	Fi...	Filter	Filter	Filter	...	Filter	Filter	Filter	Filter	Filte
1	1	Mika	test@test.org	2016-10-16 11:13:13.697220		$2a$10$mx7JgM...	Williams	Other	11/09/1972	ww
2	2	Maxine	teacher-1@teacher.org	2016-10-16 11:13:14.184313		$2a$10$vRW4Er...	Murazik	Female	6/6/1975	ww
3	3	Enoch	teacher-2@teacher.org	2016-10-16 11:13:14.342746		$2a$10$4YxKlxG...	Orn	Male	5/1/1959	ww
4	4	Alverta	teacher-3@teacher.org	2016-10-16 11:13:14.506608		$2a$10$/hxmdrsa...	Fritsch	Male	10/1/1986	ww
5	5	Trever	teacher-4@teacher.org	2016-10-16 11:13:14.649893		$2a$10$kZnx3sv4...	Robel	Female	24/3/1953	ww
6	6	Mozelle	teacher-5@teacher.org	2016-10-16 11:13:14.812200		$2a$10$KxvZVjD...	Schowalter	Male	18/8/1963	ww
7	7	Sharon	student-1@student.org	2016-10-16 11:13:14.944272		$2a$10$Yqh4M4d...	Gerhold	Female	15/5/1981	NU
8	8	August	student-2@student.org	2016-10-16 11:13:15.087409		$2a$10$wxGdoCj...	Kohler	Female	7/7/2009	NU
9	9	Luis	student-3@student.org	2016-10-16 11:13:15.242262		$2a$10$c5CQE1...	Mosciski	Female	5/7/2006	ww
10	10	Michel	student-4@student.org	2016-10-16 11:13:15.352410		$2a$10$8bMka6d...	Wuckert	Female	20/4/2010	NU
11	11	Morris	student-5@student.org	2016-10-16 11:13:15.498215		$2a$10$Wjia7Aru...	Cormier	Female	16/2/2005	NU
12	12	Mylene	student-6@student.org	2016-10-16 11:13:15.646918		$2a$10$Fa8mxny...	Rodriguez	Male	6/12/1981	NU
13	13	Gwen	student-7@student.org	2016-10-16 11:13:15.806562		$2a$10$eNznedF...	Hoppe	Female	10/5/1996	NU
14	14	Hazel	student-8@student.org	2016-10-16 11:13:15.950517		$2a$10$NMXz6z...	O'Hara	Female	8/2/1982	ww
15	15	Kari	student-9@student.org	2016-10-16 11:13:16.073860		$2a$10$zmE0iXd...	Fay	Female	1/4/2005	NU
				2016-10-16						

Figure 1. Generated Data as viewed in DB Browser for SQLlite

	facebook_ID	nber_	eacher_qualification	eache	dmi	parent_name	parent_email	a
	Filter	Filter	Filter	Filter	F...	Filter	Filter	Fil
1	www.facebook.com/mika_music	N...	Graduate of Drama studies a...	N...	t	NULL	NULL	22 Qı
2	www.facebook.com/MaxineMurazik	N...	Graduated Waelchi Academy	t	f	NULL	NULL	55 Hc
3	www.facebook.com/EnochOrn	N...	Graduated North Eichmann	t	f	NULL	NULL	68 Bu
4	www.facebook.com/AlvertaFritsch	N...	Graduated Durgan Academy	t	f	NULL	NULL	67 Pa
5	www.facebook.com/TreverRobel	N...	Graduated West Ohio Institute	t	f	NULL	NULL	60 Je
6	www.facebook.com/MozelleSchowalter	N...	Graduated Kiehn University	t	f	NULL	NULL	11 Pa
7	NULL	N...	NULL	f	f	NA	NA	43 Er
8	NULL	N...	NULL	f	f	Lavonne	AugustKohler@parent.com	66 Cı
9	www.facebook.com/LuisMosciski	N...	NULL	f	f	Roman	LuisMosciski@parent.com	17 Ha
10	NULL	N...	NULL	f	f	Ezekiel	MichelWuckert@parent.com	31 Hc
11	NULL	N...	NULL	f	f	Alek	MorrisCormier@parent.com	78 Fa
12	NULL	N...	NULL	f	f	NA	NA	69 Ze
13	NULL	N...	NULL	f	f	NA	NA	28 Bc
14	www.facebook.com/HazelO'Hara	N...	NULL	f	f	NA	NA	28 Bc
15	NULL	N...	NULL	f	f	Jany	KariFay@parent.com	88 Ka
								70

Figure 2. Generated Data as viewed in DB Browser for SQLlite

	address	parent_moblie	user_recieve_emails	parent_recieve_emails	eset_diges	set_sent_
	Filter	Filter	Filter	Filter	Filter	Filter
1	22 Queen St, Brisbane, QLD, 4000	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*
2	593 Howell Squares, QLD	*NULL*	t	*NULL*	*NULL*	*NULL*
3	6861 Buddy Ports, QLD	*NULL*	f	*NULL*	*NULL*	*NULL*
4	67180 Paucek Forest, QLD	*NULL*	t	*NULL*	*NULL*	*NULL*
5	60434 Jessica Gardens, QLD	*NULL*	f	*NULL*	*NULL*	*NULL*
6	112 Parisian Shoals, QLD	*NULL*	f	*NULL*	*NULL*	*NULL*
7	4342 Erdman Road, QLD	NA	t	f	*NULL*	*NULL*
8	665 Cummings Spurs, QLD	1-553-251-1170	f	f	*NULL*	*NULL*
9	17451 Hamill Fort, QLD	(663) 723-8529 x8621	f	t	*NULL*	*NULL*
10	310 Heaney Knolls, QLD	(405) 784-7053 x83411	f	f	*NULL*	*NULL*
11	78637 Fadel Circles, QLD	610.949.9970	t	t	*NULL*	*NULL*
12	69071 Zemlak Mission, QLD	NA	f	f	*NULL*	*NULL*
13	287 Beahan Hills, QLD	NA	t	f	*NULL*	*NULL*
14	28405 Bonnie Branch, QLD	NA	f	f	*NULL*	*NULL*
15	88873 Kavon Expressway, QLD	625-135-2019	f	f	*NULL*	**NULL**

Figure 3. Generated Data as viewed in DB Browser of SQLlite

Above is the development database entries for users after the generation of test data from the script shown above. As seen, besides from the admin which as discussed is not random, all users have randomly generated first names, last names, genders, passwords hashes (Due to salting), date of births, addresses, etc. This is as expected from the seed script shown above.

Unfortunately, there are two main errors with the generated data. Some users may have a rather feminine names yet have a gender of male. Also, phone numbers are of completely random style. These were both left in for their own reason. Gender was left in cause our development team does not typecast gender stereotypes – also would be rather time ineffective to develop an algorithm to choose approximate gender based on name. The phone numbers show a problem with the validation users which will need to be fixed or at minimum discussed with the client team.