

The Relational Model of a Library Management System

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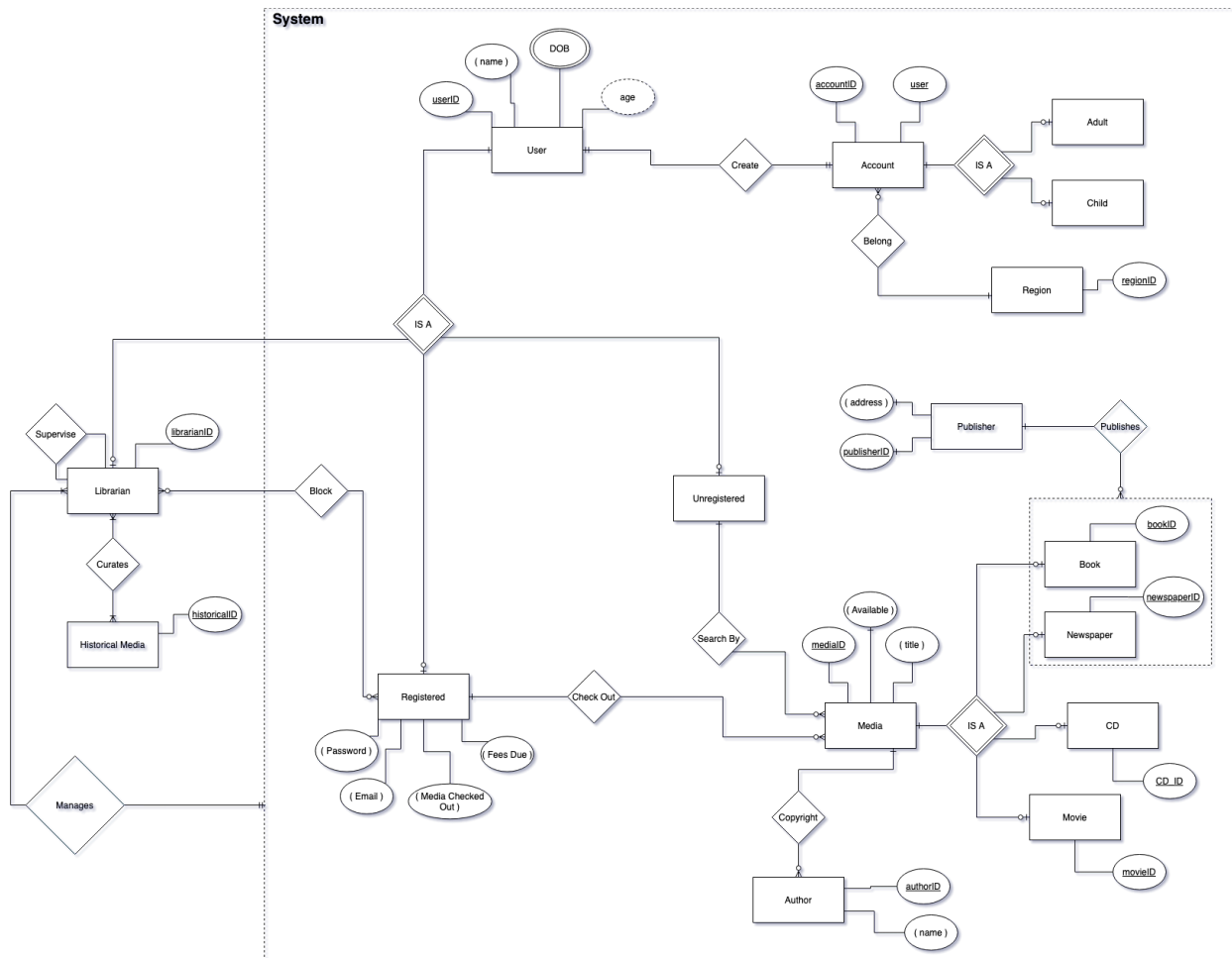
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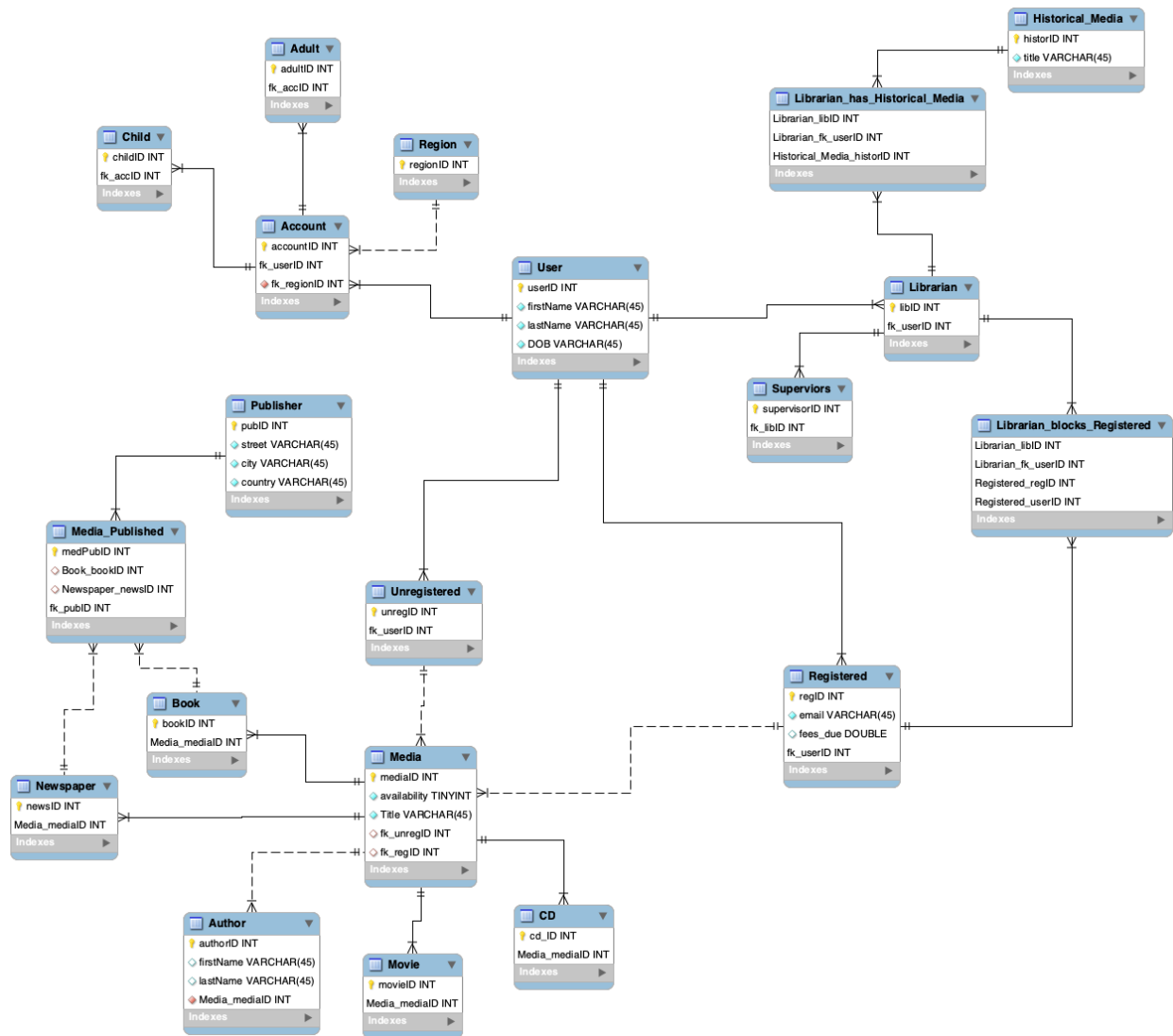
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Section I: Final ERD Version



Section II: Database Model



Section III: Forward Engineering

```
1. -- MySQL Workbench Forward Engineering
2.
3. SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;
4. SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0;
5. SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_
  IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';
6.
7. -- -----
8. -- Schema LibrarySystem
9. -- -----
10.
11. -- -----
12. -- Schema LibrarySystem
13. -- -----
14. CREATE SCHEMA IF NOT EXISTS `LibrarySystem` DEFAULT CHARACTER SET utf8mb4 COLLATE utf8m
  b4_0900_ai_ci ;
15. USE `LibrarySystem` ;
16.
17. -- -----
18. -- Table `LibrarySystem`.`Region`
19. -- -----
20. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Region` (
21.   `regionID` INT NOT NULL,
22.   `region_Name` VARCHAR(45) NOT NULL,
23.   PRIMARY KEY (`regionID`))
24. ENGINE = InnoDB
25. DEFAULT CHARACTER SET = utf8mb4
26. COLLATE = utf8mb4_0900_ai_ci;
27.
28.
29. -- -----
30. -- Table `LibrarySystem`.`User`
31. -- -----
32. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`User` (
33.   `userID` INT NOT NULL,
34.   `firstName` VARCHAR(45) NOT NULL,
35.   `lastName` VARCHAR(45) NOT NULL,
36.   `DOB` VARCHAR(45) NOT NULL,
37.   PRIMARY KEY (`userID`))
38. ENGINE = InnoDB
39. DEFAULT CHARACTER SET = utf8mb4
40. COLLATE = utf8mb4_0900_ai_ci;
41.
42.
43. -- -----
44. -- Table `LibrarySystem`.`Account`
45. -- -----
46. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Account` (
47.   `accountID` INT NOT NULL,
48.   `fk_userID` INT NOT NULL,
49.   `fk_regionID` INT NOT NULL,
50.   PRIMARY KEY (`accountID`, `fk_userID`),
51.   INDEX `fk_Account_User_idx` (`fk_userID` ASC) VISIBLE,
52.   INDEX `fk_Account_Region1_idx` (`fk_regionID` ASC) VISIBLE,
53.   CONSTRAINT `fk_Account_Region1`
54.     FOREIGN KEY (`fk_regionID`)
55.     REFERENCES `LibrarySystem`.`Region` (`regionID`),
```

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56. CONSTRAINT `fk_Account_User`
57. FOREIGN KEY (`fk_userID`)
58. REFERENCES `LibrarySystem`.`User` (`userID`))
59. ENGINE = InnoDB
60. DEFAULT CHARACTER SET = utf8mb4
61. COLLATE = utf8mb4_0900_ai_ci;
62.
63.
64. -- -----
65. -- Table `LibrarySystem`.`Adult`
66. -- -----
67. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Adult` (
68. `adultID` INT NOT NULL,
69. `fk_accID` INT NOT NULL,
70. PRIMARY KEY (`adultID`, `fk_accID`),
71. INDEX `fk_accountID_idx` (`fk_accID` ASC) VISIBLE,
72. CONSTRAINT `fk_accountID`
73. FOREIGN KEY (`fk_accID`)
74. REFERENCES `LibrarySystem`.`Account` (`accountID`))
75. ENGINE = InnoDB
76. DEFAULT CHARACTER SET = utf8mb4
77. COLLATE = utf8mb4_0900_ai_ci;
78.
79.
80. -- -----
81. -- Table `LibrarySystem`.`Registered`
82. -- -----
83. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Registered` (
84. `regID` INT NOT NULL,
85. `email` VARCHAR(45) NOT NULL,
86. `fees_due` DOUBLE NULL DEFAULT NULL,
87. `fk_userID` INT NOT NULL,
88. PRIMARY KEY (`regID`, `fk_userID`),
89. INDEX `fk_userID_idx` (`fk_userID` ASC) VISIBLE,
90. CONSTRAINT `fk_userID`
91. FOREIGN KEY (`fk_userID`)
92. REFERENCES `LibrarySystem`.`User` (`userID`))
93. ENGINE = InnoDB
94. DEFAULT CHARACTER SET = utf8mb4
95. COLLATE = utf8mb4_0900_ai_ci;
96.
97.
98. -- -----
99. -- Table `LibrarySystem`.`Unregistered`
100. -- -----
101. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Unregistered` (
102. `unregID` INT NOT NULL,
103. `fk_userID` INT NOT NULL,
104. PRIMARY KEY (`unregID`, `fk_userID`),
105. INDEX `fk_userID_idx` (`fk_userID` ASC) VISIBLE,
106. CONSTRAINT `fk_usrID`
107. FOREIGN KEY (`fk_userID`)
108. REFERENCES `LibrarySystem`.`User` (`userID`))
109. ENGINE = InnoDB
110. DEFAULT CHARACTER SET = utf8mb4
111. COLLATE = utf8mb4_0900_ai_ci;
112.
113.
114. -- -----
115. -- Table `LibrarySystem`.`Media`
116. -- -----

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```

117. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Media` (
118.     `mediaID` INT NOT NULL AUTO_INCREMENT,
119.     `availability` TINYINT NOT NULL,
120.     `Title` VARCHAR(45) NOT NULL,
121.     `fk_unregID` INT NULL DEFAULT NULL,
122.     `fk_regID` INT NULL DEFAULT NULL,
123.     PRIMARY KEY (`mediaID`),
124.     INDEX `fk_Media_Unregistered1_idx` (`fk_unregID` ASC) VISIBLE,
125.     INDEX `fk_Media_Registered1_idx` (`fk_regID` ASC) VISIBLE,
126.     CONSTRAINT `fk_Media_Registered1`
127.         FOREIGN KEY (`fk_regID`)
128.         REFERENCES `LibrarySystem`.`Registered` (`regID`),
129.     CONSTRAINT `fk_Media_Unregistered1`
130.         FOREIGN KEY (`fk_unregID`)
131.         REFERENCES `LibrarySystem`.`Unregistered` (`unregID`))
132. ENGINE = InnoDB
133. AUTO_INCREMENT = 46
134. DEFAULT CHARACTER SET = utf8mb4
135. COLLATE = utf8mb4_0900_ai_ci;
136.
137.
138.
139. -- Table `LibrarySystem`.`Author`
140.
141. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Author` (
142.     `authorID` INT NOT NULL AUTO_INCREMENT,
143.     `firstName` VARCHAR(45) NULL DEFAULT NULL,
144.     `lastName` VARCHAR(45) NULL DEFAULT NULL,
145.     `Media_mediaID` INT NOT NULL,
146.     PRIMARY KEY (`authorID`),
147.     INDEX `fk_Author_Media1_idx` (`Media_mediaID` ASC) VISIBLE,
148.     CONSTRAINT `fk_Author_Media1`
149.         FOREIGN KEY (`Media_mediaID`)
150.         REFERENCES `LibrarySystem`.`Media` (`mediaID`))
151. ENGINE = InnoDB
152. AUTO_INCREMENT = 15
153. DEFAULT CHARACTER SET = utf8mb4
154. COLLATE = utf8mb4_0900_ai_ci;
155.
156.
157.
158. -- Table `LibrarySystem`.`Book`
159.
160. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Book` (
161.     `bookID` INT NOT NULL AUTO_INCREMENT,
162.     `Media_mediaID` INT NOT NULL,
163.     PRIMARY KEY (`bookID`, `Media_mediaID`),
164.     INDEX `Media_mediaID_idx` (`Media_mediaID` ASC) VISIBLE,
165.     CONSTRAINT `Media_mediaID`
166.         FOREIGN KEY (`Media_mediaID`)
167.         REFERENCES `LibrarySystem`.`Media` (`mediaID`))
168. ENGINE = InnoDB
169. AUTO_INCREMENT = 9
170. DEFAULT CHARACTER SET = utf8mb4
171. COLLATE = utf8mb4_0900_ai_ci;
172.
173.
174.
175. -- Table `LibrarySystem`.`CD`
176.
177. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`CD` (

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178.     `cd_ID` INT NOT NULL AUTO_INCREMENT,
179.     `Media_mediaID` INT NOT NULL,
180.     PRIMARY KEY (`cd_ID`, `Media_mediaID`),
181.     INDEX `fk_CD_Media1_idx` (`Media_mediaID` ASC) VISIBLE,
182.     CONSTRAINT `fk_CD_Media1`
183.         FOREIGN KEY (`Media_mediaID`)
184.         REFERENCES `LibrarySystem`.`Media` (`mediaID`)
185. ENGINE = InnoDB
186. AUTO_INCREMENT = 4
187. DEFAULT CHARACTER SET = utf8mb4
188. COLLATE = utf8mb4_0900_ai_ci;
189.
190.
191. -----
192. -- Table `LibrarySystem`.`Child`
193. -----
194. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Child` (
195.     `childID` INT NOT NULL,
196.     `fk_accID` INT NOT NULL,
197.     PRIMARY KEY (`childID`, `fk_accID`),
198.     INDEX `fk_accountID_idx` (`fk_accID` ASC) VISIBLE,
199.     CONSTRAINT `fk_acctID`
200.         FOREIGN KEY (`fk_accID`)
201.         REFERENCES `LibrarySystem`.`Account` (`accountID`)
202. ENGINE = InnoDB
203. DEFAULT CHARACTER SET = utf8mb4
204. COLLATE = utf8mb4_0900_ai_ci;
205.
206.
207. -----
208. -- Table `LibrarySystem`.`Historical_Media`
209. -----
210. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Historical_Media` (
211.     `historID` INT NOT NULL AUTO_INCREMENT,
212.     `title` VARCHAR(45) NOT NULL,
213.     PRIMARY KEY (`historID`))
214. ENGINE = InnoDB
215. AUTO_INCREMENT = 7
216. DEFAULT CHARACTER SET = utf8mb4
217. COLLATE = utf8mb4_0900_ai_ci;
218.
219.
220. -----
221. -- Table `LibrarySystem`.`Librarian`
222. -----
223. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Librarian` (
224.     `libID` INT NOT NULL,
225.     `fk_userID` INT NOT NULL,
226.     PRIMARY KEY (`libID`, `fk_userID`),
227.     INDEX `UserId_idx` (`fk_userID` ASC) VISIBLE,
228.     CONSTRAINT `UserId`
229.         FOREIGN KEY (`fk_userID`)
230.         REFERENCES `LibrarySystem`.`User` (`userID`)
231. ENGINE = InnoDB
232. DEFAULT CHARACTER SET = utf8mb4
233. COLLATE = utf8mb4_0900_ai_ci;
234.
235.
236. -----
237. -- Table `LibrarySystem`.`Librarian_blocks_Registered`
238. -----

```



```

239. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Librarian_blocks_Registered` (
240.     `Librarian_libID` INT NOT NULL,
241.     `Librarian_fk_userID` INT NOT NULL,
242.     `Registered_regID` INT NOT NULL,
243.     `Registered_userID` INT NOT NULL,
244.     PRIMARY KEY (`Librarian_libID`, `Librarian_fk_userID`, `Registered_regID`, `Registered_userID`),
245.     INDEX `fk_Librarian_has_Registered_Registered1_idx` (`Registered_regID` ASC, `Registered_userID` ASC) VISIBLE,
246.     INDEX `fk_Librarian_has_Registered_Librarian1_idx` (`Librarian_libID` ASC, `Librarian_fk_userID` ASC) VISIBLE,
247.     CONSTRAINT `fk_Librarian_has_Registered_Librarian1`
248.     FOREIGN KEY (`Librarian_libID`, `Librarian_fk_userID`)
249.     REFERENCES `LibrarySystem`.`Librarian` (`libID`, `fk_userID`),
250.     CONSTRAINT `fk_Librarian_has_Registered_Registered1`
251.     FOREIGN KEY (`Registered_regID`, `Registered_userID`)
252.     REFERENCES `LibrarySystem`.`Registered` (`regID`, `fk_userID`))
253. ENGINE = InnoDB
254. DEFAULT CHARACTER SET = utf8mb4
255. COLLATE = utf8mb4_0900_ai_ci;
256.
257.
258. -- -----
259. -- Table `LibrarySystem`.`Librarian_has_Historical_Media`
260. -- -----
261. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Librarian_has_Historical_Media` (
262.     `Librarian_libID` INT NOT NULL,
263.     `Librarian_fk_userID` INT NOT NULL,
264.     `Historical_Media_historID` INT NOT NULL,
265.     PRIMARY KEY (`Librarian_libID`, `Librarian_fk_userID`, `Historical_Media_historID`),
266.     INDEX `fk_Librarian_has_Historical_Media_Historical_Media1_idx` (`Historical_Media_historID` ASC) VISIBLE,
267.     INDEX `fk_Librarian_has_Historical_Media_Librarian1_idx` (`Librarian_libID` ASC, `Librarian_fk_userID` ASC) VISIBLE,
268.     CONSTRAINT `fk_Librarian_has_Historical_Media_Historical_Media1`
269.     FOREIGN KEY (`Historical_Media_historID`)
270.     REFERENCES `LibrarySystem`.`Historical_Media` (`historID`),
271.     CONSTRAINT `fk_Librarian_has_Historical_Media_Librarian1`
272.     FOREIGN KEY (`Librarian_libID`, `Librarian_fk_userID`)
273.     REFERENCES `LibrarySystem`.`Librarian` (`libID`, `fk_userID`))
274. ENGINE = InnoDB
275. DEFAULT CHARACTER SET = utf8mb4
276. COLLATE = utf8mb4_0900_ai_ci;
277.
278.
279. -- -----
280. -- Table `LibrarySystem`.`Publisher`
281. -- -----
282. CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Publisher` (
283.     `pubID` INT NOT NULL AUTO_INCREMENT,
284.     `street` VARCHAR(45) NOT NULL,
285.     `city` VARCHAR(45) NOT NULL,
286.     `country` VARCHAR(45) NOT NULL,
287.     PRIMARY KEY (`pubID`))
288. ENGINE = InnoDB
289. AUTO_INCREMENT = 7
290. DEFAULT CHARACTER SET = utf8mb4
291. COLLATE = utf8mb4_0900_ai_ci;
292.
293.

```

```

294.  -----
295.  -- Table `LibrarySystem`.`Newspaper`
296.  -----
297.  CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Newspaper` (
298.      `newsID` INT NOT NULL AUTO_INCREMENT,
299.      `Media_mediaID` INT NOT NULL,
300.      PRIMARY KEY (`newsID`, `Media_mediaID`),
301.      INDEX `fk_Newspaper_Media1_idx` (`Media_mediaID` ASC) VISIBLE,
302.      CONSTRAINT `fk_Newspaper_Media1`
303.          FOREIGN KEY (`Media_mediaID`)
304.          REFERENCES `LibrarySystem`.`Media` (`mediaID`))
305.  ENGINE = InnoDB
306.  AUTO_INCREMENT = 4
307.  DEFAULT CHARACTER SET = utf8mb4
308.  COLLATE = utf8mb4_0900_ai_ci;
309.
310.
311.  -----
312.  -- Table `LibrarySystem`.`Media_Published`
313.  -----
314.  CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Media_Published` (
315.      `medPubID` INT NOT NULL AUTO_INCREMENT,
316.      `Book_bookID` INT NULL DEFAULT NULL,
317.      `Newspaper_newsID` INT NULL DEFAULT NULL,
318.      `fk_pubID` INT NOT NULL,
319.      PRIMARY KEY (`medPubID`, `fk_pubID`),
320.      INDEX `Book_bookID_idx` (`Book_bookID` ASC) VISIBLE,
321.      INDEX `Newspaper_newsID_idx` (`Newspaper_newsID` ASC) VISIBLE,
322.      INDEX `fk_Media_Published_Publisher1_idx` (`fk_pubID` ASC) VISIBLE,
323.      CONSTRAINT `Book_bookID`
324.          FOREIGN KEY (`Book_bookID`)
325.          REFERENCES `LibrarySystem`.`Book` (`bookID`),
326.      CONSTRAINT `fk_Media_Published_Publisher1`
327.          FOREIGN KEY (`fk_pubID`)
328.          REFERENCES `LibrarySystem`.`Publisher` (`pubID`),
329.      CONSTRAINT `Newspaper_newsID`
330.          FOREIGN KEY (`Newspaper_newsID`)
331.          REFERENCES `LibrarySystem`.`Newspaper` (`newsID`))
332.  ENGINE = InnoDB
333.  AUTO_INCREMENT = 26
334.  DEFAULT CHARACTER SET = utf8mb4
335.  COLLATE = utf8mb4_0900_ai_ci;
336.
337.
338.  -----
339.  -- Table `LibrarySystem`.`Movie`
340.  -----
341.  CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Movie` (
342.      `movieID` INT NOT NULL AUTO_INCREMENT,
343.      `Media_mediaID` INT NOT NULL,
344.      PRIMARY KEY (`movieID`, `Media_mediaID`),
345.      INDEX `fk_Movie_Media1_idx` (`Media_mediaID` ASC) VISIBLE,
346.      CONSTRAINT `fk_Movie_Media1`
347.          FOREIGN KEY (`Media_mediaID`)
348.          REFERENCES `LibrarySystem`.`Media` (`mediaID`))
349.  ENGINE = InnoDB
350.  AUTO_INCREMENT = 5
351.  DEFAULT CHARACTER SET = utf8mb4
352.  COLLATE = utf8mb4_0900_ai_ci;
353.
354.

```

```

355.      -----
356.      -- Table `LibrarySystem`.`Superviors`
357.      -----
358.      CREATE TABLE IF NOT EXISTS `LibrarySystem`.`Superviors` (
359.          `supervisorID` INT NOT NULL,
360.          `fk_libID` INT NOT NULL,
361.          PRIMARY KEY (`supervisorID`, `fk_libID`),
362.          INDEX `fk_libID_idx` (`fk_libID` ASC) VISIBLE,
363.          CONSTRAINT `fk_libID`
364.              FOREIGN KEY (`fk_libID`)
365.              REFERENCES `LibrarySystem`.`Librarian` (`libID`))
366.      ENGINE = InnoDB
367.      DEFAULT CHARACTER SET = utf8mb4
368.      COLLATE = utf8mb4_0900_ai_ci;
369.
370.
371.      SET SQL_MODE=@OLD_SQL_MODE;
372.      SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
373.      SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;

```

Section IV: Inserting Data

```
1. use LibrarySystem;
2.
3. INSERT INTO `LibrarySystem`.`User`
4. (`userID`,
5. `firstName`,
6. `lastName`,
7. `DOB`)
8. VALUES
9. (1, 'Mary', 'Johnson', '1989-11-15'),
10. (2, 'Alfred', 'Kang', '1976-04-29'),
11. (3, 'Link', 'Lupo', '2013-01-31'),
12. (4, 'Sharolyn', 'Fimbres', '1970-12-02'),
13. (5, 'Ulysses', 'Banks', '1975-03-04'),
14. (6, 'Mohammed', 'Square', '2010-09-07'),
15. (7, 'Emmie', 'Lupo', '1987-02-25'),
16. (8, 'Vikki', 'Zylstra', '2011-04-21'),
17. (9, 'Angelica', 'Millhouse', '1996-02-27');
18.
19. INSERT INTO `LibrarySystem`.`Region`
20. (`regionID`, `region_Name`)
21. VALUES
22. (1, 'North America'), (2, 'South America'), (3, 'Europe');
23.
24. INSERT INTO `LibrarySystem`.`Account`
25. (`accountID`,
26. `fk_userID`,
27. `fk_regionID`)
28. VALUES
29. (1, 1, 2), (2, 3, 2), (3, 2, 3),
30. (4, 6, 1), (5, 9, 3), (6, 8, 2),
31. (7, 5, 3), (8, 4, 1), (9, 7, 1);
32.
33. INSERT INTO `LibrarySystem`.`Adult`
34. (`adultID`,
35. `fk_accID`)
36. VALUES
37. (1,1),
38. (2,3),
39. (3,8),
40. (4,9),
41. (5,5),
42. (6,7);
43.
44. INSERT INTO `LibrarySystem`.`Child`
45. (`childID`,
46. `fk_accID`)
47. VALUES
48. (1,2),
49. (2,4),
50. (3,6);
51.
52. INSERT INTO `LibrarySystem`.`Librarian`
53. (`libID`,
54. `fk_userID`)
55. VALUES
56. (1,1), (2,5), (3,4);
57.
```

```

58. INSERT INTO `LibrarySystem`.`Historical_Media`
59. (`title`)
60. VALUES
61. ('Leonardo da Vinci: A Life in Drawing'),
62. ('Frida Kahlo: Appearances Can Be Deceiving'),
63. ('Camp: Notes on Fashion');
64.
65. INSERT INTO `LibrarySystem`.`Librarian_has_Historical_Media`
66. (`Librarian_libID`,
67. `Librarian_fk_userID`,
68. `Historical_Media_historID`)
69. VALUES
70. (1,1,1),
71. (2,5,2),
72. (3,4,2);
73.
74. INSERT INTO `LibrarySystem`.`Superviors`
75. (`supervisorID`,
76. `fk_libID`)
77. VALUES
78. (1,1),
79. (2, 2),
80. (3,3);
81.
82. INSERT INTO `LibrarySystem`.`Librarian_blocks_Registered`
83. (`Librarian_libID`,
84. `Librarian_fk_userID`,
85. `Registered_regID`,
86. `Registered_userID`)
87. VALUES
88. (1,1,2,7);
89.
90. INSERT INTO `LibrarySystem`.`Registered`
91. (`regID`,
92. `email`,
93. `fees_due`,
94. `fk_userID`)
95. VALUES
96. (1, 'lbanks@yaho.com', DEFAULT, 3),
97. (2, 'elupo33@mail.com', 2.50, 7),
98. (3, 'vzylstra@ao.com', DEFAULT, 8);
99.
100. INSERT INTO `LibrarySystem`.`Unregistered`
101. (`unregID`,
102. `fk_userID`)
103. VALUES
104. (1,2),
105. (2,6),
106. (3,9);
107.
108. INSERT INTO `LibrarySystem`.`Media`
109. (`availability`,
110. `Title`)
111. VALUES
112. (TRUE, '1984'),
113. (TRUE, 'The Little Prince'),
114. (TRUE, 'The Help'),
115. (TRUE, 'The Cat in the Hat'),
116. (TRUE, 'Life of Pi'),
117. (True, 'Thriller'),
118. (True, 'Smyle'),

```

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119.      (True, 'Lemonade'),
120.      (True, 'USA Today'),
121.      (True, 'The New York Times'),
122.      (True, 'The Wall Street Journal'),
123.      (False, 'To Kill a Mockingbird'),
124.      (False, 'Romeo and Juliet'),
125.      (False, 'Little Women');
126.
127.      INSERT INTO `LibrarySystem`.`Author`
128.      (`firstName`,
129.      `lastName`,
130.      `Media_mediaID`)
131.      VALUES
132.      ('George','Orwell',15),
133.      ('Louisa May','Alcott',31),
134.      ('William','Shakespeare',30),
135.      ('Michael','Jackson',20);
136.
137.      INSERT INTO `LibrarySystem`.`Author`
138.      (`firstName`,
139.      `Media_mediaID`)
140.      VALUES
141.      ('Dr. Seuss',18),
142.      ('Beyonce',22),
143.      ('Kyle',21);
144.
145.      INSERT INTO `LibrarySystem`.`Book`
146.      (`Media_mediaID`)
147.      VALUES
148.      (15),
149.      (18),
150.      (31),
151.      (30);
152.
153.      INSERT INTO `LibrarySystem`.`Newspaper`
154.      (
155.      `Media_mediaID`)
156.      VALUES
157.      (24),
158.      (23),
159.      (25);
160.
161.      INSERT INTO `LibrarySystem`.`CD`
162.      (`Media_mediaID`)
163.      VALUES
164.      (20),
165.      (22),
166.      (21);
167.
168.      INSERT INTO `LibrarySystem`.`Movie`
169.      (`Media_mediaID`)
170.      VALUES
171.      (16),
172.      (17),
173.      (19),
174.      (29);
175.
176.      INSERT INTO `LibrarySystem`.`Publisher`
177.      (
178.      `street`,
179.      `city`,

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```
180.     `country`)
181.     VALUES
182.     ('123 Street Ave.', 'Berkeley', 'USA'),
183.     ('456 Basic Lane.', 'Dubai', 'UAE'),
184.     ('1400 Niccolett Ave.', 'Minneapolis', 'USA');
185.
186.     INSERT INTO `LibrarySystem`.`Media_Published`
187.     (`Book_bookID`,
188.     `fk_pubID`)
189.     VALUES
190.     (1,1),
191.     (4,3),
192.     (3,2),
193.     (2,2);
194.
195.     INSERT INTO `LibrarySystem`.`Media_Published`
196.     (`Newspaper_newsID`,
197.     `fk_pubID`)
198.     VALUES
199.     (3,1),
200.     (2,3),
201.     (1,2);
```

Section V: Testing

Section VI: Testing Table

Test	Statement	Entity	Pass/Fails	Error Description
1	Select	User	Pass	None
2	Select	User	Pass	None
2	Update	User	Pass	None
2	Delete	User	Pass	None
5	Select	Media, Book	Pass	None
5	Delete	Media	Fails	Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails (`librarysystem`.`book`, CONSTRAINT `Media_mediaID` FOREIGN KEY (`Media_mediaID`) REFERENCES `media` (`mediaID`))
8	Select	Media, Author	Pass	None