

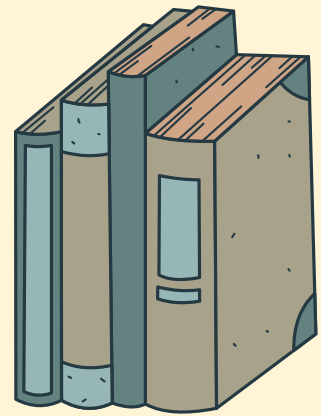
# DATABASE PERPUSTAKAAN

## KELOMPOK 3:

- Albert Leonardi – 2602167031 – Computer Science – LK01
- James Christopher Dharmadi – 2602073681 – Computer Science – LK01
- Shawn Andrew – 2602066783 – Computer Science – LK01
- Kevin Maxwell – 2602083524 – Computer Science – LK01



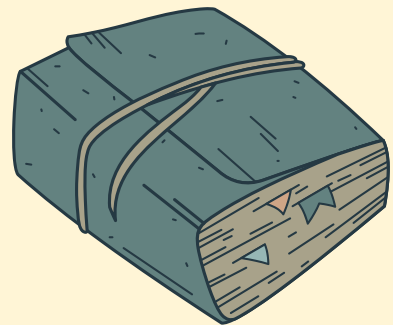
# PRESENTATION OUTLINE



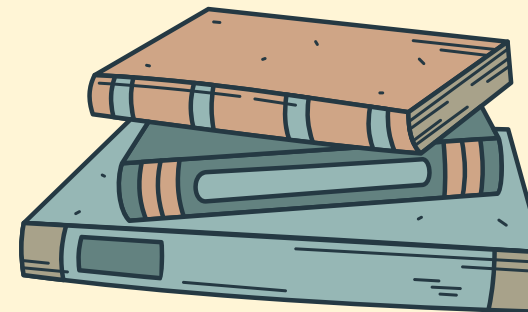
## CHAPTER 1



## CHAPTER 3



## CHAPTER 2



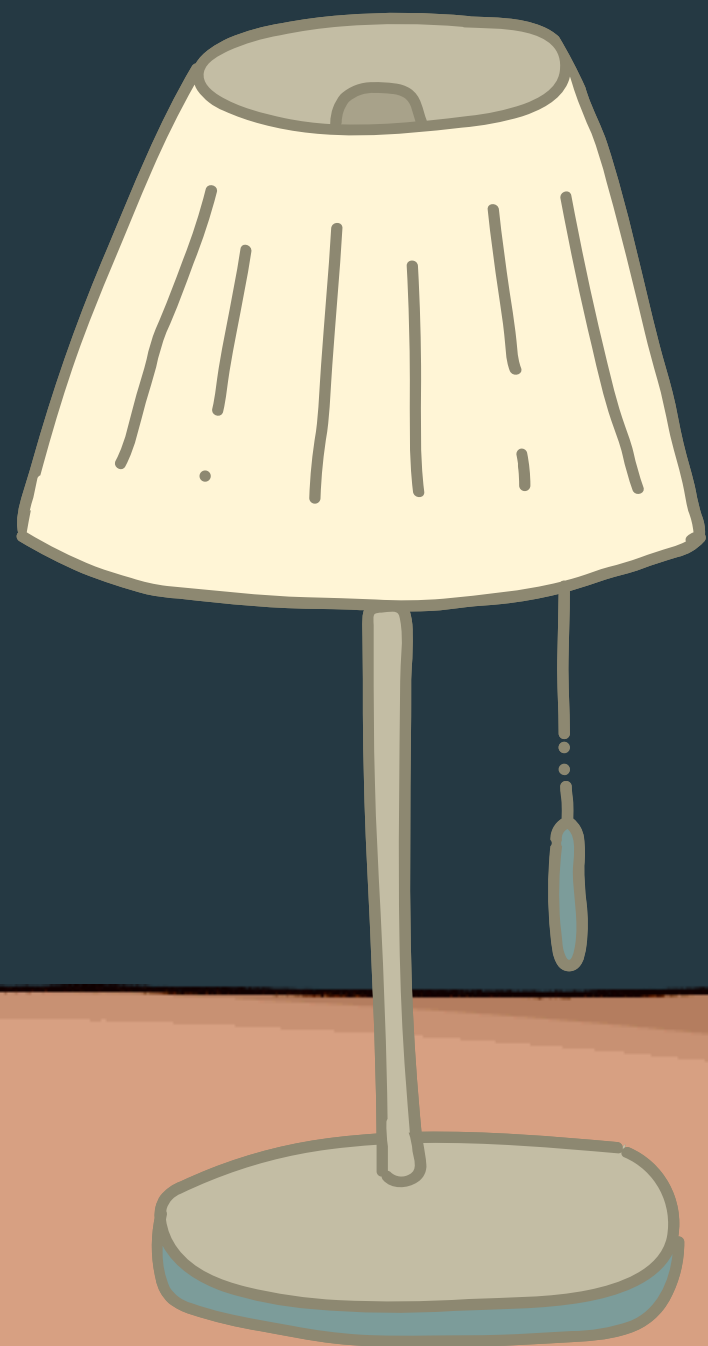
## CHAPTER 4

# CHAPTER 1: THE DESCRIPTION OF THE CASE USED.



Kelompok kami membuat sistem database untuk sebuah perpustakaan. Sistem ini digunakan untuk memudahkan perpustakaan mengelola data-data perpustakaan, seperti data buku, data anggota, dan data transaksi peminjaman dan pengembalian.

# CHAPTER 2: THE PROBLEM YOU IDENTIFIED.



# MASALAH

- Masalah efisiensi.
- Masalah keamanan data.

- Masalah akurasi data.
- Masalah aksesibilitas data.





# CHAPTER 3: THE SAMPLE DATA DESCRIPTION AND LIST OF ANOMALIES MAY OCCUR.

## SAMPLE DATA

- Books Table.
- Members Table.
- Transaction Table.

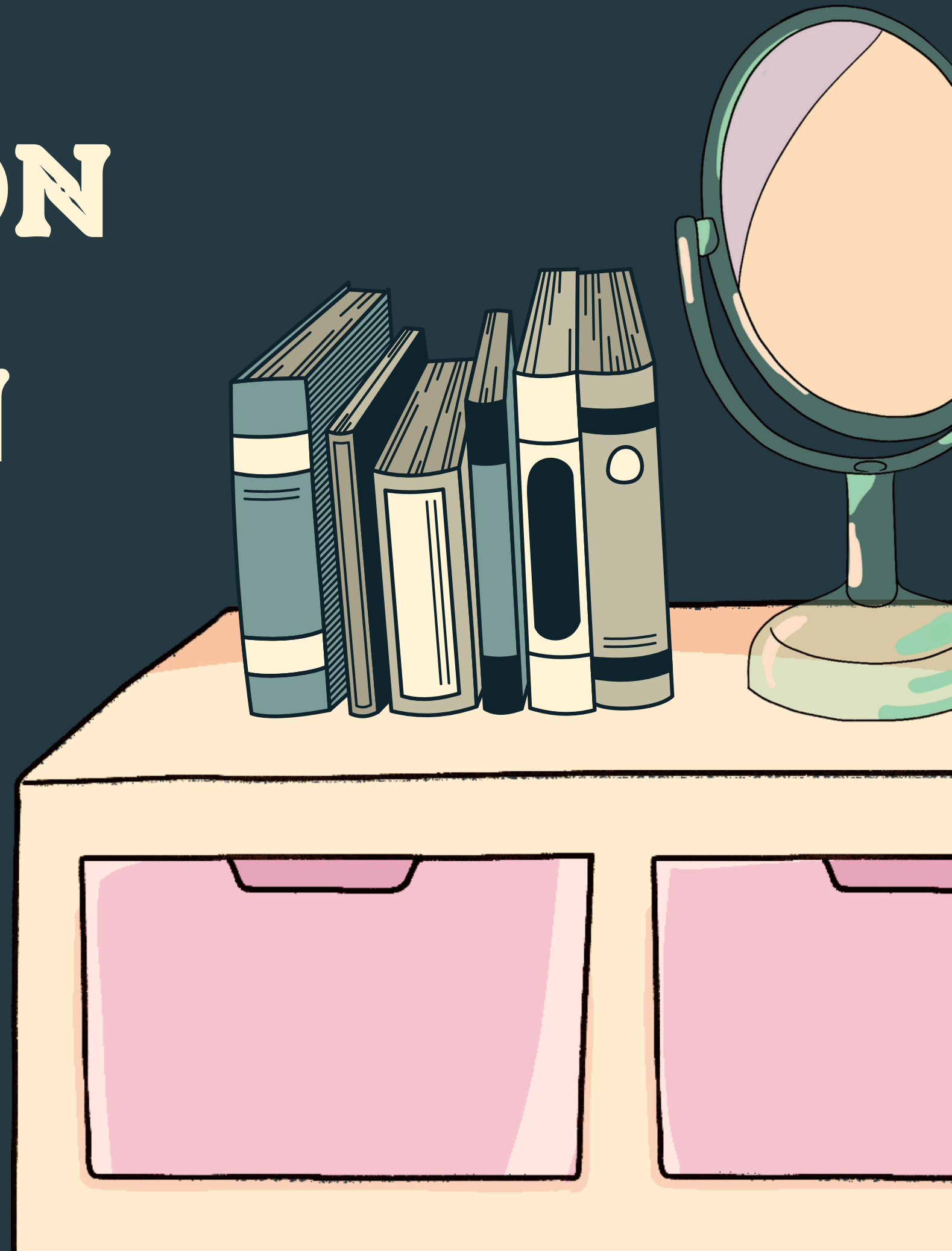


# ANOMALI

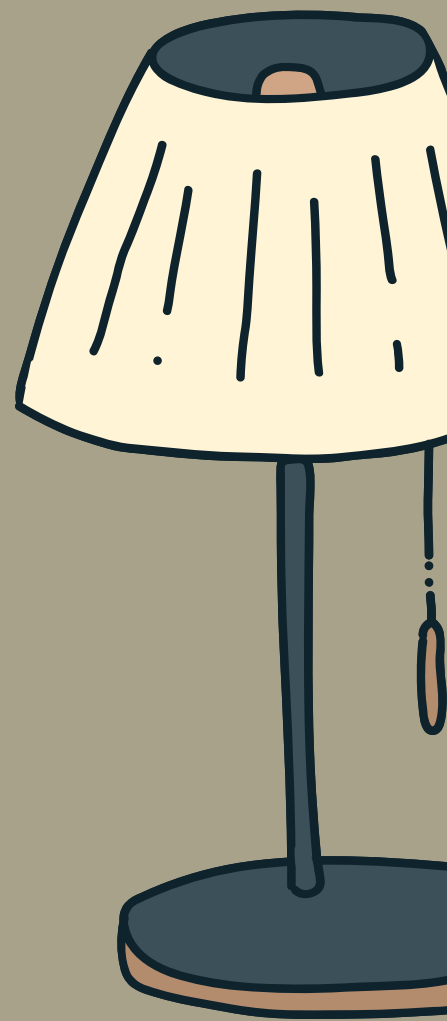
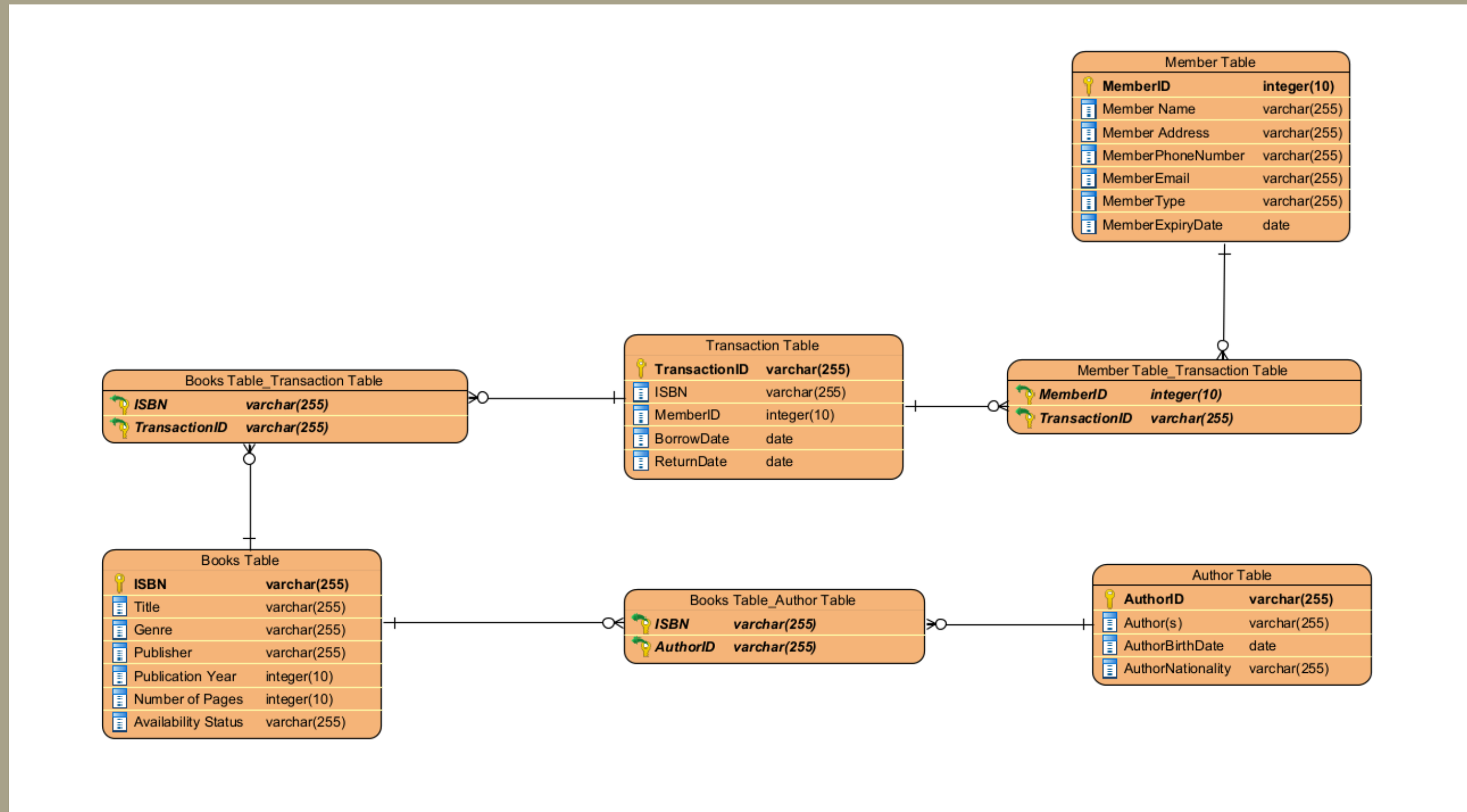
- Update Anomaly.
- Delete Anomaly.



# CHAPTER 4: IMPLEMENTATION OF NORMALIZATION







UNF

ISBN	Title	Author(s)	Genre	Publisher	Publication Year	Number of Pages	Availability Status		Member ID	Member Name	Member Address	Member Phone Number	Member Email	Member Type	Member's join Date	First visit date	Last visit date	Visit count	Author ID	Author's birth date	Author's nationality
							Available	Not Available													
9780204478042	The Secret City	Anthony Browne	Mystery	Macmillan	2000	320	Available	-	1001	John Smith	123 Main St, Chicago	555-1234	john.smith@gmail.com	Student	2024-01-01	2025-01-01	2025-01-10	000001	1978-05-10	American	
9780000440241	Legend of the Guardians	David Almond	Sci-Fi	Gallop Press	2010	400	-	Not Available	1002	Sarah Johnson	456 Oak St, Toronto	555-5678	sarahjohnson@gmail.com	Staff	2024-03-05	2025-01-01	2025-03-10	000002	1985-08-20	British	
9780203407844	A Tale of Two Cities	Charles Dickens	Historical	Blackwell	1859	512	Available	-	1003	Michael Brown	789 Pine St, Washington	555-8901	michael.brown@gmail.com	Staff	2024-05-20	2025-01-01	2025-04-15	000003	1812-02-07	British	
9780452458946	The Silent Forest	Maria Garcia	Fantasy	Endersoft Inc.	2021	350	Available	-	1004	Alice Williams	321 Cedar St, New York City	555-4321	alice.williams@gmail.com	Student	2024-04-10	2025-01-01	2025-05-01	000004	1998-11-20	Spanish	
9780475463240	The Alchemist	Paulo Coelho	Fiction	HarperCollins	1988	224	Available	-	1005	David Green	210 Maple St, Minneapolis	555-8765	davidgreengmail.com	Student	2024-06-01	2025-01-01	2025-06-15	000005	1947-08-24	Brazilian	
9780349488941	The Great Gatsby	F. Scott Fitzgerald	Drama	Vintage Books	1925	180	-	Not Available	1006	Anna Davis	567 Elm St, Denver	555-3456	anna.davis@gmail.com	Student	2024-08-10	2025-01-01	2025-07-10	000006	1896-09-24	American	
9780204478042	The Secret City	Anthony Browne	Thriller	Cypress Publishing	2000	454	-	Not Available	1007	Chris Adams	890 Oak St, Melbourne	555-8901	chris.adams@gmail.com	Faculty	2024-09-01	2025-01-01	2025-08-10	000007	1980-03-10	American	
9780000440241	Legend of the Guardians	David Almond	Fiction	HarperCollins	1990	280	Available	-	1008	Nigam Malik	125 Pine St, Washington	555-8765	nigam.malik@gmail.com	Staff	2024-09-20	2025-01-01	2025-09-10	000008	1970-01-10	American	
9780203407844	A Tale of Two Cities	Charles Dickens	Fantasy	Blackwell Press	1859	310	Available	-	1009	Isabella Kim	654 Cedar St, Seoul	555-8901	isabella.kim@gmail.com	Student	2024-10-01	2025-01-01	2025-10-10	000009	1812-02-07	British	
9780452458946	The Silent Forest	Maria Garcia	Science	Endersoft Books	1995	400	-	Not Available	1010	Robert Turner	901 Maple St, London	555-4321	robert.turner@gmail.com	Faculty	2024-10-10	2025-01-01	2025-10-20	000010	1975-10-05	British	
9780475463240	The Alchemist	Paulo Coelho	Contemporary	HarperCollins	1988	224	Available	-	1011	David Wilson	888 Birch St, Houston	555-8765	davidwilson@gmail.com	Staff	2024-11-01	2025-01-01	2025-11-10	000011	1970-01-10	American	

# 1NF

[illegible]

2NF

Books Table										
ISBN	Title	Genre	Publisher	Publication Year	Number of Pages	Availability Status	AuthorID	Author(s)	AuthorBirthDate	AuthorNationality
978-1-2345-6789-0	The Lost City	Mystery	BlueBooks	2020	320	Available	001A001	Emily Johnson	1975-05-12	American
978-0-9876-5432-1	Beyond the Stars	Sci-Fi	GalaxyPress	2019	400	Not Available	002A002	David Rodriguez	1980-08-23	British
978-3-2109-8765-4	A Tale of Two Cities	Historical	ClassicBooks	1859	512	Available	003A003	Charles Dickens	1812-02-07	British
978-5-4321-0987-6	The Silent Forest	Fantasy	EnchantedPress	2021	350	Available	004A004	Maria Garcia	1985-11-30	Spanish
978-9-8765-4321-0	The Alchemist	Fiction	WisdomBooks	1988	224	Available	005A005	Paulo Coelho	1947-08-24	Brazilian
978-2-3456-7890-1	The Great Gatsby	Classic	VintageBooks	1925	180	Not Available	006A006	F. Scott Fitzgerald	1896-09-24	American
978-1-2345-6789-2	The Da Vinci Code	Thriller	CrypticPublishing	2008	454	Not Available	007A007	Dan Brown	1964-06-22	American
978-0-9876-5432-3	To Kill a Mockingbird	Fiction	HarperCollins	1960	281	Available	008A008	Harper Lee	1926-04-28	American
978-3-2109-8765-5	The Hobbit	Fantasy	MiddleEarthPress	1937	310	Available	009A009	J.R.R. Tolkien	1892-01-03	British
978-5-4321-0987-7	Pride and Prejudice	Romance	RomanticNovels	1813	432	Not Available	010A010	Jane Austen	1775-12-16	British
978-9-8765-4321-1	The Catcher in the Rye	Coming of Age	HiddenBooks	1951	224	Available	011A011	J.D. Salinger	1919-01-01	American

Member Table						
MemberID	Member Name	Member Address	MemberPhone Number	MemberEmail	MemberType	MemberExpiryDate
001	John Smith	123 Main St, Cityville	555-1234	john.smith@email.com	Student	2024-01-01
002	Sarah Johnson	456 Oak St, Townsville	555-5678	sarah.johnson@email.com	Staff	2024-02-15
003	Michael Brown	789 Pine St, Villagetown	555-9876	michael.brown@email.com	Staff	2024-03-20
004	Jessica White	101 Cedar St, Forest City	555-4321	jessica.white@email.com	Student	2024-04-10
005	Kevin Green	202 Maple St, Mountainville	555-8765	kevin.green@email.com	Student	2024-05-05
006	Laura Davis	303 Elm St, Dreamland	555-2345	laura.davis@email.com	Student	2024-06-30
007	Chris Adams	404 Oak St, Mysteryville	555-8765	chris.adams@email.com	Faculty	2024-07-15
008	Megan Wilson	505 Pine St, Mockingbirdtown	555-5678	megan.wilson@email.com	Staff	2024-08-20
009	Brian Harris	606 Cedar St, Shireville	555-9876	brian.harris@email.com	Student	2024-09-25
010	Rachel Turner	707 Maple St, Loveland	555-4321	rachel.turner@email.com	Faculty	2024-10-10
011	Daniel Moore	808 Elm St, Holdenfield	555-8765	daniel.moore@email.com	Staff	2024-11-05

Transaction Table				
TransactionID	ISBN	MemberID	BorrowDate	ReturnDate
001T123	978-1-2345-6789-0	001	2023-11-21	2023-12-11
002T456	978-0-9876-5432-1	002	2023-11-22	2023-12-12
003T789	978-3-2109-8765-4	003	2023-11-23	2023-12-13
004T101	978-5-4321-0987-6	004	2023-11-24	2023-12-14
005T202	978-9-8765-4321-0	005	2023-11-25	2023-12-15
006T303	978-2-3456-7890-1	006	2023-11-26	2023-12-16
007T404	978-1-2345-6789-2	007	2023-11-27	2023-12-17
008T505	978-0-9876-5432-3	008	2023-11-28	2023-12-18
009T606	978-3-2109-8765-5	009	2023-11-29	2023-12-19
010T707	978-5-4321-0987-7	010	2023-11-30	2023-12-20
011T808	978-9-8765-4321-1	011	2023-12-01	2023-12-21

# 3NF

Books Table

ISBN	Title	Genre	Publisher	Publication Year	Number of Pages	Availability Status
978-1-2345-6789-0	The Lost City	Mystery	BlueBooks	2020	320	Available
978-0-9876-5432-1	Beyond the Stars	Sci-Fi	GalaxyPress	2019	400	Not Available
978-3-2109-8765-4	A Tale of Two Cities	Historical	ClassicBooks	1859	512	Available
978-5-4321-0987-6	The Silent Forest	Fantasy	EnchantedPress	2021	350	Available
978-9-8765-4321-0	The Alchemist	Fiction	WisdomBooks	1988	224	Available
978-2-3456-7890-1	The Great Gatsby	Classic	VintageBooks	1925	180	Not Available
978-1-2345-6789-2	The Da Vinci Code	Thriller	CrypticPublishing	2003	454	Not Available
978-0-9876-5432-3	To Kill a Mockingbird	Fiction	HarperCollins	1960	281	Available
978-3-2109-8765-5	The Hobbit	Fantasy	MiddleEarthPress	1937	310	Available
978-5-4321-0987-7	Pride and Prejudice	Romance	RomanticNovels	1813	432	Not Available
978-9-8765-4321-1	The Catcher in the Rye	Coming of Age	HoldenBooks	1951	224	Available

Member Table

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002	Sarah Johnson	456 Oak St, Townsville	555-5678	sarah.johnson@email.com	Staff	2024-02-15
003	Michael Brown.	789 Pine St, Villagetown	555-9876	michael.brown@email.com	Staff	2024-03-20
004	Jessica White	101 Cedar St, Forest City	555-4321	jessica.white@email.com	Student	2024-04-10
005	Kevin Green	202 Maple St, Mountainville	555-8765	kevin.green@email.com	Student	2024-05-05
006	Laura Davis	303 Elm St, Dreamland	555-2345	laura.davis@email.com	Student	2024-06-30
007	Chris Adams	404 Oak St, Mysteryville	555-8765	chris.adams@email.com	Faculty	2024-07-15
008	Megan Wilson	505 Pine St, Mockingbirdtown	555-5678	megan.wilson@email.com	Staff	2024-08-20
009	Brian Harris	606 Cedar St, Shireville	555-9876	brian.harris@email.com	Student	2024-09-25
010	Rachel Turner	707 Maple St, Loveland	555-4321	rachel.turner@email.com	Faculty	2024-10-10
011	Daniel Moore	808 Elm St, Holdenfield	555-8765	daniel.moore@email.com	Staff	2024-11-05

Transaction Table

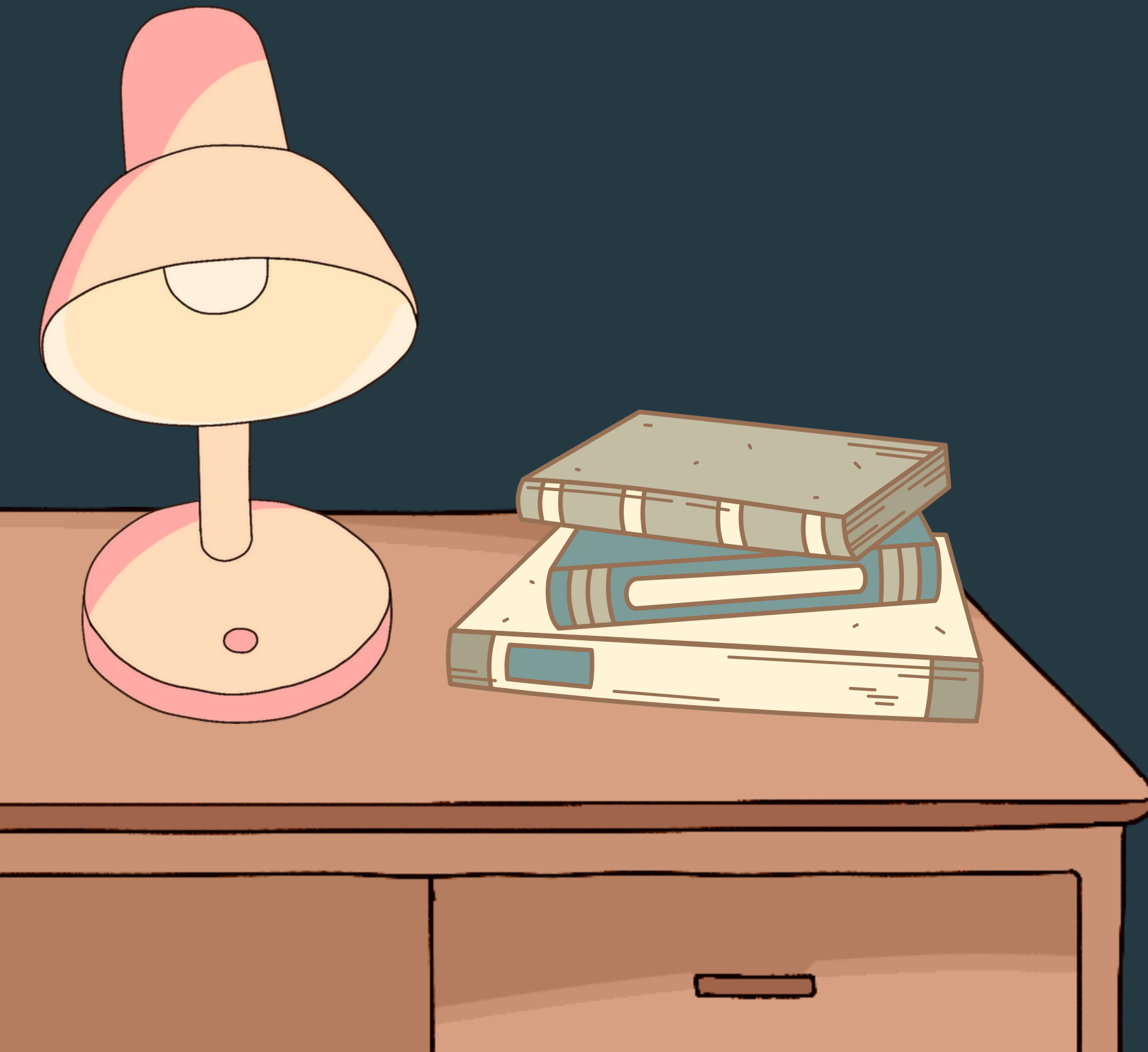
TransactionID	ISBN	MemberID	BorrowDate	ReturnDate
001T123	978-1-2345-6789-0	001	2023-11-21	2023-12-11
002T456	978-0-9876-5432-1	002	2023-11-22	2023-12-12
003T789	978-3-2109-8765-4	003	2023-11-23	2023-12-13
004T101	978-5-4321-0987-6	004	2023-11-24	2023-12-14
005T202	978-9-8765-4321-0	005	2023-11-25	2023-12-15
006T303	978-2-3456-7890-1	006	2023-11-26	2023-12-16
007T404	978-1-2345-6789-2	007	2023-11-27	2023-12-17
008T505	978-0-9876-5432-3	008	2023-11-28	2023-12-18
009T606	978-3-2109-8765-5	009	2023-11-29	2023-12-19
010T707	978-5-4321-0987-7	010	2023-11-30	2023-12-20
011T808	978-9-8765-4321-1	011	2023-12-01	2023-12-21

Author Table

AuthorID	Author(s)	AuthorBirthDate	AuthorNationality
001A001	Emily Johnson	1975-05-12	American
002A002	David Rodriguez	1980-08-23	British
003A003	Charles Dickens	1812-02-07	British
004A004	Maria Garcia	1985-11-30	Spanish
005A005	Paulo Coelho	1947-08-24	Brazilian
006A006	F. Scott Fitzgerald	1896-09-24	American
007A007	Dan Brown	1964-06-22	American
008A008	Harper Lee	1926-04-28	American
009A009	J.R.R. Tolkien	1892-01-03	British
010A010	Jane Austen	1775-12-16	British
011A011	J.D. Salinger	1919-01-01	American



# CONCLUSION



Sebuah Perpustakaan membutuhkan suatu sistem database untuk meningkatkan efisiensi pengelolaan data, meningkatkan akurasi data, meningkatkan keamanan data dan meningkatkan kemudahan akses data.

Pada sistem database ini memiliki 4 tabel yaitu books, member, transactions dan membership table.

Books table berisi tentang data-data informasi buku, Member table berisi data-data anggota perpustakaan, Membership table berisi tentang tipe keanggotaan dan tanggal kedaluwarsa keanggotaan untuk setiap anggota dan Transactions Table Berisi informasi tentang transaksi peminjaman buku.

The background is a solid dark teal color. It is decorated with four stylized, light teal clouds. Each cloud has a thick black outline and contains several smaller, concentric spiral patterns. The clouds are positioned in the corners: top-left, top-right, bottom-left, and bottom-right.

# THANK YOU FOR LISTENING!

Don't hesitate to ask any questions!