



DATABASE TECHNOLOGY

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NORMALISASI DATABASE APLIKASI MINDEASE



LATAR BELAKANG



Belakangan ini, kesehatan mental menjadi salah satu isu yang menarik perhatian yang mana menjadi salah satu bagian dari Hak Asasi Manusia (HAM) yang sangat berguna untuk membangun relasi dan sarana pengembangan diri. Seiring perkembangan zaman, permasalahan yang dialami masyarakat semakin kompleks. Menurut Riset Kesehatan Nasional Indonesia (RISKESDAS) tahun 2013, 9 juta orang menderita depresi, 14 juta orang di atas 15 tahun mengalami kecemasan, dan sebagainya.



Jika kondisi kesehatan mental generasi muda Indonesia terganggu, maka dikhawatirkan roda perekonomian Indonesia akan terganggu. Maka dari itu, perlu adanya kesadaran untuk mengatasi masalah kesehatan mental. Salah satunya adalah dengan mengembangkan aplikasi khusus kesehatan mental.

APLIKASI MINDEASE

Aplikasi MindEase merupakan salah satu terobosan untuk permasalahan kesehatan mental, yang mana menjadi perantara untuk mempertemukan pengguna dengan psikiater.

Sebagai aplikasi dengan fungsionalitas interaksi antarpengguna, pasien dan psikiater merupakan entitas dengan atribut yang berbeda. Dengan kemungkinan peningkatan kompleksitas akan berbagai transaksi seperti berinteraksi, membuat janji konsultasi, dan aktivitas lainnya, maka peran normalisasi Database dibutuhkan.



SKENARIO

PERMASALAHAN

Leora adalah mahasiswa semester akhir di sebuah universitas. Beberapa bulan terakhir Leora mengalami gejala seperti kecemasan, sulit tidur, dan kehilangan minat.



SOLUSI

Leora menemukan aplikasi MindEase. Leora kemudian mencari ahli dan berinteraksi dengan psikiater pilihannya. Kemudian ia diberikan diagnosis yang tercatat pada aplikasi.

SKENARIO

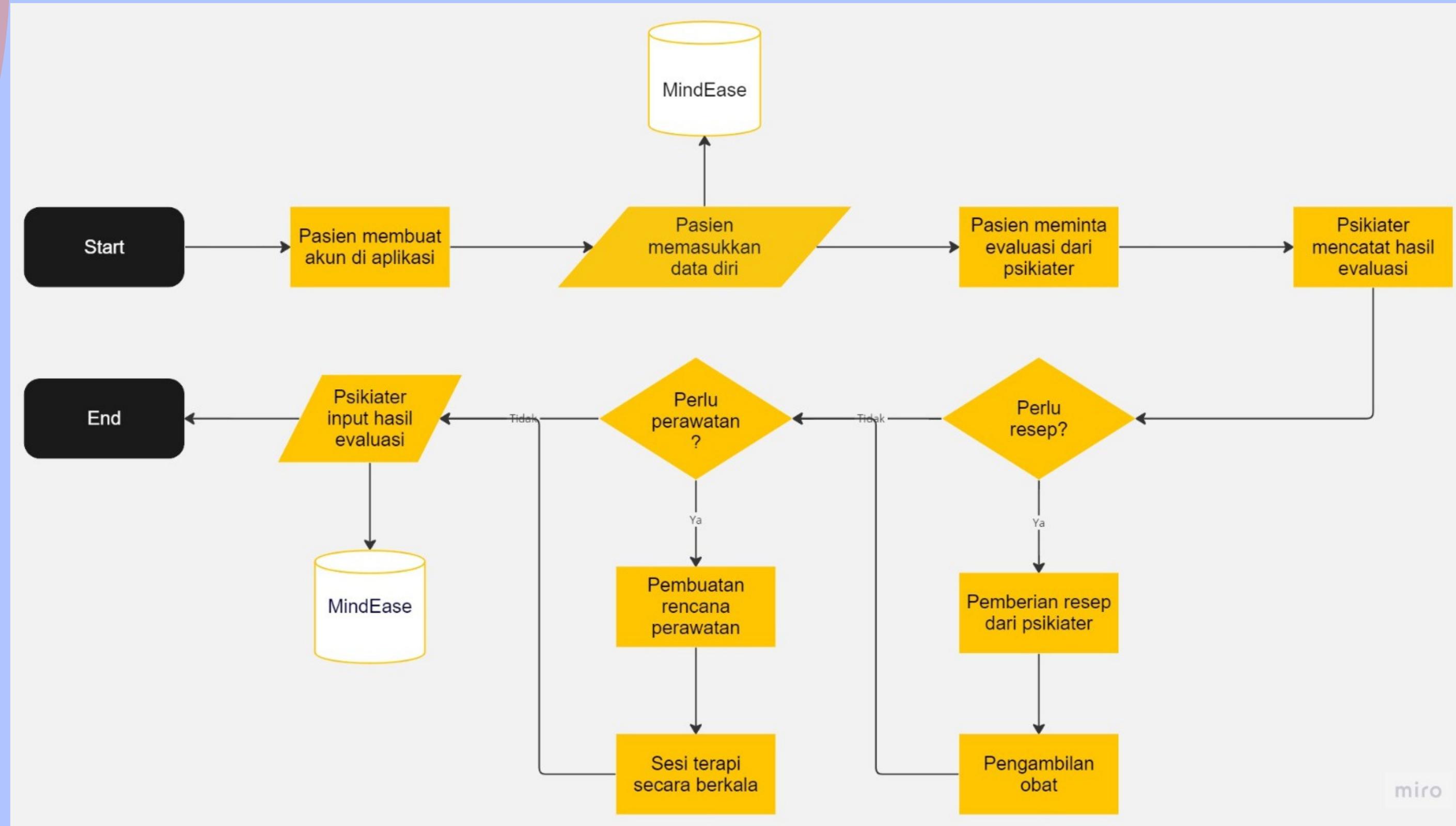
Seorang pemilik perusahaan obat ingin menguji efektivitas obat yang dijualnya. Perusahaan tersebut kemudian bekerja sama dengan aplikasi MindEase untuk memperoleh data-data keefektifan obat yang diproduksi oleh perusahaan tersebut di pasaran.



Dengan menggunakan database pada aplikasi MindEase, pemilik perusahaan tersebut dapat menilai keefektifan obatnya dengan memerhatikan data-data evaluasi di tabel basis data aplikasi MindEase.

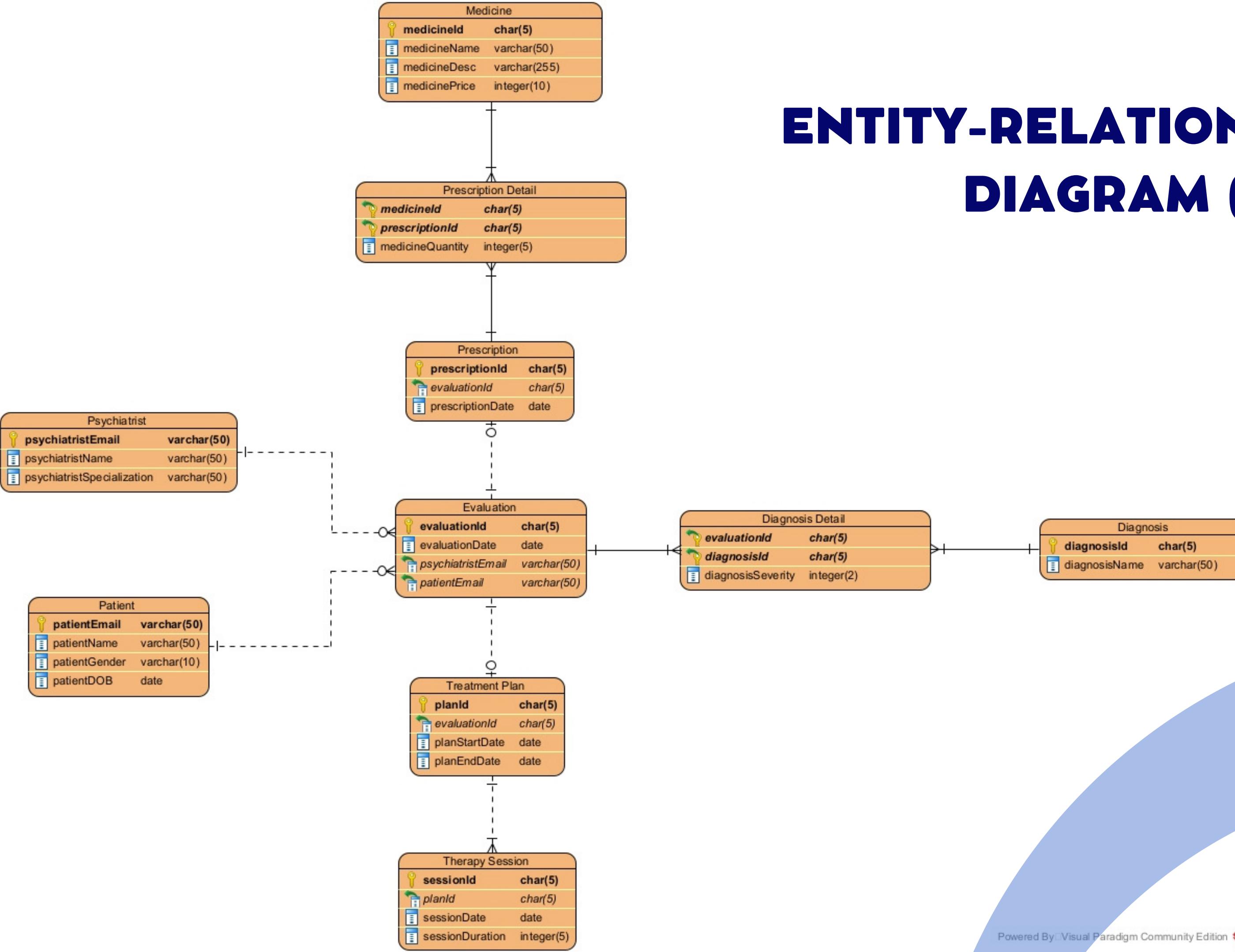


FLOWCHART



Flowchart proses kerja user saat menjalankan aplikasi MindEase

ENTITY-RELATIONSHIP DIAGRAM (ERD)



SAMPEL DATA

DAFTAR

Pengguna memasukkan data-data pribadi ke database. Data ini digunakan saat membuat janji dengan psikiater. Sistem aplikasi memerlukan atribut pasien yaitu nama pasien, jenis kelamin, alamat e-mail, dan tanggal lahir. Begitu juga psikiater memiliki atribut seperti nama, spesifikasi keahlian, dan alamat e-mail. Kedua entitas ini berinteraksi dan membentuk entitas baru ; evaluation.

Berikut adalah contoh sampel satu data yang akan dinormalisasi

evaluationId(PK)	diagnosisId(PK)	medicineId(PK)	sessionId(PK)	patientName	patientGender	patientEmail	patientDOB	evaluationDate	diagnosisName	diagnosisSeverity	psychiatristName	psychiatristSpecialization	psychiatristEmail
EV001	DG001	MD001	TS001	John Doe	Male	john.doe@gmail.com	15/05/1990	01/01/2022	Depression		5 Smith	Psychiatry	smith@gmail.com

prescriptionId	prescriptionDate	medicineName	medicineDesc	medicinePrice	medicineQuantity	planId	planStartDate	planEndDate	sessionDate	sessionDuration
PC001	01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	TP001	02/01/2022	28/02/2022	05/01/2022	60 minutes

ANOMALI DATA



INSERT

Insert terjadi ketika suatu informasi baru ditambahkan sementara data-data lainnya belum ada. Pada aplikasi MindEase, data pasien baru yaitu nama, jenis kelamin, tanggal lahir, dan alamat email dimasukkan.

UPDATE

Update terjadi ketika pembaruan satu informasi memerlukan pembaruan di banyak tempat. Pada aplikasi MindEase, ketika 1 psikiater menangani banyak pasien, namanya terduplikasi dan jika mengubah e-mailnya, semua data menjadi tidak valid.

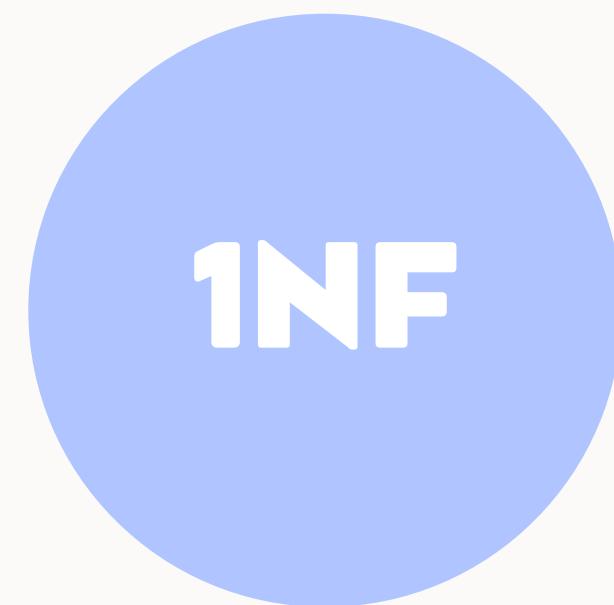
DELETE

Delete terjadi ketika penghapusan informasi berakibat pada kehilangan informasi lain yang tidak direncanakan. Pada aplikasi MindEase, jika ingin menghapus data pasien maka akan sekaligus kehilangan data psikiater yang menanganiinya.

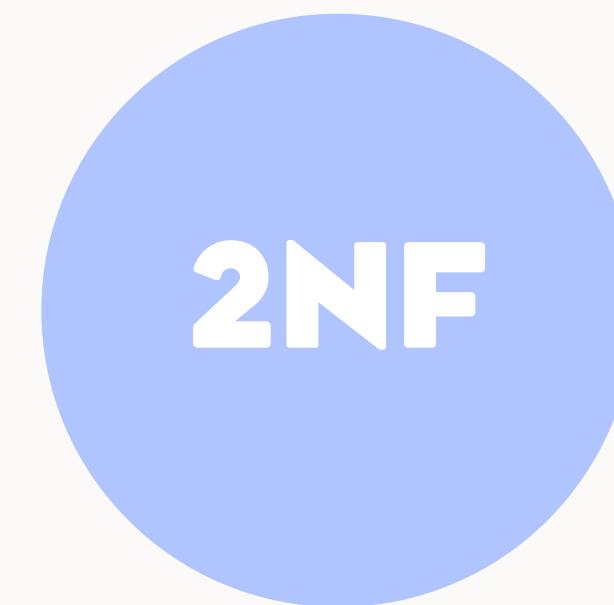
IMPLEMENTASI NORMALISASI DATA



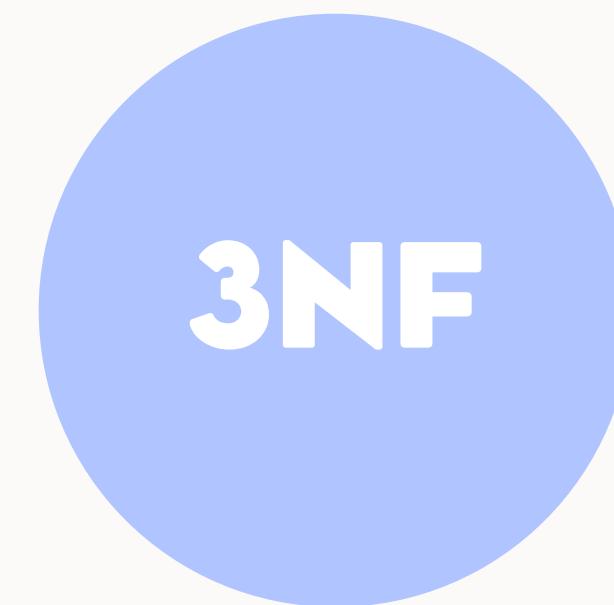
**Unnormalized
Form**



**First Normal
Form**



**Second Normal
Form**



**Third Normal
Form**



**Boyce-Codd Normal
Form**

UNF

Unnormalized Form

Unnormalized Form (UNF) adalah bentuk tak normal berdasarkan data yang diperoleh langsung. Bentuk ini biasanya masih mengandung redundansi data.

Kumpulan data yang direkam tidak harus mengikuti format tertentu, sehingga data bisa saja tidak lengkap atau terduplikasi.

Nama Pasien	Jenis Kelamin Pasien	Email Pasien	Tanggal Lahir Pasien	Nomor Evaluasi	Tanggal Evaluasi	Hasil Diagnosis	Tingkat Keparahan Diagnosis	Nama Psikiater	Spesialisasi Psikiater	Email Psikiater
John Doe	Male	john.doe@gmail.com	15/05/1990	Evaluasi 1	01/01/2022	Depression	5	Smith	Psychiatry	smith@gmail.com
Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	Evaluasi 2	10/02/2022	Anxiety Disorder	8	Johnson	Psychiatry	johson@gmail.com
Michael Brown	Male	michael.brown@gmail.com	18/07/1988	Evaluasi 3	05/03/2022	Bipolar Disorder	5	Johnson	Psychiatry	johson@gmail.com
Emily Johnson	Female	emily.johnson@gmail.com	12/03/2000	Evaluasi 4	20/04/2022	Schizophrenia	10	Wilson	Psychopharmacology	wilson@gmail.com
Alex Johnson	Male	alex.johnson@gmail.com	25/07/1992	Evaluasi 5	25/05/2022	ADHD	3	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
Yena	Female	yena@gmail.com	15/03/1990	Evaluasi 6	20/05/2022	Schizophrenia	5	Wilson	Psychopharmacology	wilson@gmail.com
Leo	Male	leo@gmail.com	22/06/1985	Evaluasi 7	05/01/2023	Depression	6	Smith	Psychiatry	smith@gmail.com
Lina	Female	lina@gmail.com	12/09/1988	Evaluasi 8	10/02/2023	Anxiety Disorder	8	Johnson	Psychiatry	johson@gmail.com
Lilis	Female	lilis@gmail.com	15/05/1995	Evaluasi 9	20/03/2023	Bipolar Disorder	2	Johnson	Psychiatry	johson@gmail.com
Ethan Miller	Male	ethan.miller@gmail.com	12/09/1980	Evaluasi 10	01/01/2022	PTSD	3	Sam	Psychiatry	sam.gmail.com
				Evaluasi 11	20/05/2023	Panic Disorder	6	Rizal	Psychopharmacology	rizal.gmail.com
				Evaluasi 12	25/05/2022	Depression	6			
				Evaluasi 13	22/07/2022	PTSD	7	Smith	Psychiatry	smith@gmail.com
Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	Evaluasi 14	01/01/2023	Schizophrenia	8	Wilson	Psychopharmacology	wilson@gmail.com
Liam Parker	Male	liam.parker@gmail.com	30/03/1985	Evaluasi 15	03/05/2022	Bipolar Disorder	1	Johnson	Psychiatry	johson@gmail.com
Benjamin Brooks	Male	benjamin.brooks@gmail.com	20/07/1999	Evaluasi 16	05/10/2022	PTSD	4	Sam	Psychiatry	sam.gmail.com
Robert	Male	robert@gmail.com	11/10/2002	Evaluasi 17	20/07/2023	Schizophrenia	5	Wilson	Psychopharmacology	wilson@gmail.com
William	Male	william@gmail.com	09/12/2000	Evaluasi 18	08/02/2023	ADHD	6	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
Richard	Male	richard@gmail.com	19/01/1995	Evaluasi 19	04/12/2023	Panic Disorder	4	Rizal	Psychopharmacology	rizal.gmail.com
Christopher	Male	christopher@gmail.com	22/05/1988	Evaluasi 20	20/02/2022	Anxiety Disorder	7	Johnson	Psychiatry	johnson@gmail.com
Jennifer	Female	jennifer@gmail.com	25/02/1978	Evaluasi 21	05/10/2023	Depression	8	Smith	Psychiatry	smith@gmail.com
Elizabeth	Female	elizabeth@gmail.com	23/08/1970	Evaluasi 22	02/07/2023	PTSD	7	Sam	Psychiatry	sam.gmail.com
Emma Reynolds	Female	emma.reynolds@gmail.com	10/04/1999	Evaluasi 23	27/05/2023	Bipolar Disorder	5	Johnson	Psychiatry	johnson@gmail.com
Amelia Taylor	Female	amelia.taylor@gmail.com	12/05/1978	Evaluasi 24	05/10/2022	Schizophrenia	7	Wilson	Psychopharmacology	wilson@gmail.com
Lily Peterson	Female	lily.peterson@gmail.com	08/07/1968	Evaluasi 25	22/02/2022	PTSD	5	Sam	Psychiatry	sam.gmail.com
William Foster	Male	william.foster@gmail.com	05/07/1977	Evaluasi 26	10/05/2022	ADHD	4	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
Jameson Porter	Male	jameson.porter@gmail.com	12/06/1982	Evaluasi 27	17/07/2023	Panic Disorder	7	Rizal	Psychopharmacology	rizal.gmail.com
Isabella	Female	isabella@gmail.com	17/07/1996	Evaluasi 28	15/05/2022	Anxiety Disorder	5	Johnson	Psychiatry	johson@gmail.com
Alexander	Male	alexander@gmail.com	24/04/2003	Evaluasi 29	07/03/2023	Depression	7	Smith	Psychiatry	smith@gmail.com
Scarlett Evans	Female	scarlett.evans@gmail.com	19/09/1999	Evaluasi 30	27/07/2023	Depression	4	Smith	Psychiatry	smith@gmail.com
Ella Bennett	Female	ella.bennett@gmail.com	23/03/1983	Evaluasi 31	14/06/2022	Bipolar Disorder	8	Johnson	Psychiatry	johson@gmail.com
Sophia	Female	sophia@gmail.com	22/07/1996	Evaluasi 32	28/02/2023	PTSD	9	Wilson	Psychopharmacology	wilson@gmail.com
Noah Coleman	Male	noah.coleman@gmail.com	17/07/1977	Evaluasi 33	07/12/2022	Anxiety Disorder	4	Johnson	Psychiatry	johson@gmail.com

Tanggal Resep	Nama Obat	Deskripsi Obat	Harga Obat	Jumlah Obat	Tanggal Mulai Perawatan	Tanggal Selesai Perawatan	Tanggal Sesi Terapi	Durasi Sesi Terapi
01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	02/01/2022	28/02/2022	05/01/2022	60 minutes
10/02/2022	Xanax	Commonly prescribed to treat anxiety disorders and panic attacks by reducing excessive brain activity	Rp150.000,00	5	12/02/2022	30/04/2022	18/01/2022	90 minutes
05/03/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	2	07/03/2022	31/05/2022	18/02/2022	60 minutes
	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	6			12/03/2022	45 minutes
20/04/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	2	22/02/2023	31/12/2023	20/03/2022	90 minutes
							10/03/2023	50 minutes
25/05/2022	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp120.000,00	7	04/05/2023	04/12/2023	15/04/2023	30 minutes
20/05/2022	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	4	26/05/2022	22/06/2022	15/07/2022	30 minutes
05/01/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	4	05/04/2023	22/05/2023	15/04/2023	60 minutes
10/02/2023	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00	3	15/07/2023	22/12/2023	10/08/2023	75 minutes
20/03/2023	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	1	22/03/2023	12/05/2023	24/04/2023	30 minutes
01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	2	04/01/2022	05/02/2022	20/01/2022	90 minutes
20/05/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00	5	23/05/2023	25/06/2023	22/06/2023	120 minutes
25/05/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	26/05/2022	28/06/2022	01/06/2022	90 minutes
22/07/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	23/07/2022	04/09/2022	02/08/2022	60 minutes
01/01/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	4	03/01/2023	20/03/2023	05/02/2023	120 minutes
03/05/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	1	05/05/2022	06/06/2022	20/05/2022	45 minutes
05/10/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	4	07/10/2022	07/11/2022	20/10/2022	50 minutes
20/07/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	3	20/09/2023	20/10/2023	28/07/2023	40 minutes
08/02/2023	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp.120.000,00	7	09/02/2023	11/02/2023	10/02/2023	60 minutes
04/12/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00	5	05/12/2023	07/12/2023	06/12/2023	80 minutes
20/02/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00	3	20/03/2022	20/05/2022	30/04/2022	50 minutes
05/10/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	06/10/2023	08/03/2023	07/03/2023	75 minutes
02/07/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	4	03/07/2023	21/05/2023	14/04/2023	50 minutes
27/05/2023	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	1	27/07/2023	09/07/2023	08/01/2023	100 minutes
05/10/2022	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	3	06/10/2022	08/10/2022	07/10/2022	70 minutes
22/02/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	4	22/03/2022	05/10/2022	17/04/2022	90 minutes
10/05/2022	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp.120.000,00	7	15/10/2022	15/12/2022	15/11/2022	100minutes
17/07/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00	5	20/07/2023	27/09/2023	14/08/2023	120 minutes
15/05/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00	3	15/06/2022	07/01/2022	25/06/2022	30 minutes
07/03/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	08/03/2023	10/03/2023	09/03/2023	60 minutes
27/07/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	3	27/08/2023	30/09/2023	15/09/2023	60 minutes
14/06/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	1	14/07/2022	09/07/2022	08/07/2022	90 minutes
28/02/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	3	29/03/2023	29/05/2022	29/04/2023	120 minutes
07/12/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00	3	25/07/2022	17/09/2022	08/07/2022	75 minutes

1NF

First Normal Form

First Normal Form (1NF) adalah tahapan ketika beberapa group elemen yang berulang dihilangkan agar menjadi satu harga tunggal dan setiap atribut harus bersifat atomic value.

Syarat 1NF adalah setiap baris harus berisi single value, tidak ada data terduplikasi, tidak ada kolom dengan atribut/domain yang sama, dan memiliki 1 primary key.

1NF

evaluationId(PK)	diagnosisId(PK)	medicineId(PK)	sessionId(PK)	patientName	patientGender	patientEmail	patientDOB	evaluationDate	diagnosisName	diagnosisSeverity	psychiatristName	psychiatristSpecialization	psychiatristEmail
EV001	DG001	MD001	TS001	John Doe	Male	john.doe@gmail.com	15/05/1990	01/01/2022	Depression	5	Smith	Psychiatry	smith@gmail.com
EV001	DG001	MD001	TS002	John Doe	Male	john.doe@gmail.com	15/05/1990	01/01/2022	Depression	5	Smith	Psychiatry	smith@gmail.com
EV002	DG002	MD002	TS003	Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	10/02/2022	Anxiety Disorder	8	Johnson	Psychiatry	johson@gmail.com
EV002	DG002	MD002	TS004	Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	10/02/2022	Anxiety Disorder	8	Johnson	Psychiatry	johson@gmail.com
EV003	DG003	MD003	TS005	Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	05/03/2022	Bipolar Disorder	5	Johnson	Psychiatry	johson@gmail.com
EV004	DG004	MD004	TS006	Michael Brown	Male	michael.brown@gmail.com	18/07/1988	20/04/2022	Schizophrenia	10	Wilson	Psychopharmacology	wilson@gmail.com
EV004	DG004	MD001	TS006	Michael Brown	Male	michael.brown@gmail.com	18/07/1988	20/04/2022	Schizophrenia	10	Wilson	Psychopharmacology	wilson@gmail.com
EV005	DG001	MD005	TS007	Emily Johnson	Female	emily.johnson@gmail.com	12/03/2000	25/05/2022	Depression	3	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
EV005	DG005	MD005	TS007	Emily Johnson	Female	emily.johnson@gmail.com	12/03/2000	25/05/2022	ADHD	4	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
EV006	DG004	MD004	TS008	Alex Johnson	Male	alex.johnson@gmail.com	25/07/1992	20/05/2022	Schizophrenia	5	Wilson	Psychopharmacology	wilson@gmail.com
EV007	DG001	MD001	TS009	Yena	Female	yena@gmail.com	15/03/1990	05/01/2023	Depression	6	Smith	Psychiatry	smith@gmail.com
EV008	DG002	MD006	TS010	Leo	Male	leo@gmail.com	22/06/1985	10/02/2023	Anxiety Disorder	8	Johnson	Psychiatry	johson@gmail.com
EV009	DG003	MD003	TS011	Lina	Female	lina@gmail.com	12/09/1988	20/03/2023	Bipolar Disorder	2	Johnson	Psychiatry	johson@gmail.com
EV010	DG006	MD001	TS012	Lilis	Female	lilis@gmail.com	15/05/1995	01/01/2022	PTSD	3	Sam	Psychiatry	sam.gmail.com
EV011	DG007	MD007	TS013	Ethan Miller	Male	ethan.miller@gmail.com	12/09/1980	20/05/2023	Panic Disorder	6	Rizal	Psychopharmacology	rizal.gmail.com
EV012	DG001	MD001	TS014	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	25/05/2022	Depression	6	Smith	Psychiatry	smith@gmail.com
EV013	DG006	MD001	TS015	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	22/07/2022	PTSD	7	Smith	Psychiatry	smith@gmail.com
EV014	DG004	MD004	TS016	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	01/01/2023	Schizophrenia	8	Wilson	Psychopharmacology	wilson@gmail.com
EV015	DG003	MD003	TS017	Liam Parker	Male	liam.parker@gmail.com	30/03/1985	03/05/2022	Bipolar Disorder	1	Johnson	Psychiatry	johson@gmail.com
EV016	DG006	MD001	TS018	Benjamin Brooks	Male	benjamin.brooks@gmail.com	20/07/1999	05/10/2022	PTSD	4	Sam	Psychiatry	sam.gmail.com
EV017	DG004	MD004	TS019	Robert	Male	robert@gmail.com	11/10/2002	20/07/2023	Schizophrenia	5	Wilson	Psychopharmacology	wilson@gmail.com
EV018	DG005	MD005	TS020	William	Male	william@gmail.com	09/12/2000	08/02/2023	ADHD	6	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
EV019	DG007	MD007	TS021	Richard	Male	richard@gmail.com	19/01/1995	04/12/2023	Panic Disorder	4	Rizal	Psychopharmacology	rizal.gmail.com
EV020	DG002	MD006	TS022	Christopher	Male	christopher@gmail.com	22/05/1988	20/02/2022	Anxiety Disorder	7	Johnson	Psychiatry	johson@gmail.com
EV021	DG001	MD001	TS023	Jennifer	Female	jennifer@gmail.com	25/02/1978	05/10/2023	Depression	8	Smith	Psychiatry	smith@gmail.com
EV022	DG006	MD001	TS024	Elizabeth	Female	elizabeth@gmail.com	23/08/1970	02/07/2023	PTSD	7	Sam	Psychiatry	sam.gmail.com
EV023	DG003	MD003	TS025	Emma Reynolds	Female	emma.reynolds@gmail.com	10/04/1999	27/05/2023	Bipolar Disorder	5	Johnson	Psychiatry	johson@gmail.com
EV024	DG004	MD004	TS026	Amelia Taylor	Female	amelia.taylor@gmail.com	12/05/1978	05/10/2022	Schizophrenia	7	Wilson	Psychopharmacology	wilson@gmail.com
EV025	DG006	MD001	TS027	Lily Peterson	Female	lily.peterson@gmail.com	08/07/1968	22/02/2022	PTSD	5	Sam	Psychiatry	sam.gmail.com
EV026	DG005	MD005	TS028	William Foster	Male	william.foster@gmail.com	05/07/1977	10/05/2022	ADHD	4	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com
EV027	DG007	MD007	TS029	Jameson Porter	Male	jameson.porter@gmail.com	12/06/1982	17/07/2023	Panic Disorder	7	Rizal	Psychopharmacology	rizal.gmail.com
EV028	DG002	MD006	TS030	Isabella	Female	isabella@gmail.com	17/07/1996	15/05/2022	Anxiety Disorder	5	Johnson	Psychiatry	johson@gmail.com
EV029	DG001	MD001	TS031	Alexander	Male	alexander@gmail.com	24/04/2003	07/03/2023	Depression	7	Smith	Psychiatry	smith@gmail.com
EV030	DG001	MD001	TS032	Scarlett Evans	Female	scarlett.evans@gmail.com	19/09/1999	27/07/2023	Depression	4	Smith	Psychiatry	smith@gmail.com
EV031	DG003	MD003	TS033	Ella Bennett	Female	ella.bennett@gmail.com	23/03/1983	14/06/2022	Bipolar Disorder	8	Johnson	Psychiatry	johson@gmail.com
EV032	DG006	MD004	TS034	Sophia	Female	sophia@gmail.com	22/07/1996	28/02/2023	PTSD	9	Wilson	Psychopharmacology	wilson@gmail.com
EV033	DG002	MD006	TS035	Noah Coleman	Male	noah.coleman@gmail.com	17/07/1977	07/12/2022	Anxiety Disorder	4	Johnson	Psychiatry	johson@gmail.com

prescriptionId	prescriptionDate	medicineName	medicineDesc	medicinePrice	medicineQuantity	planId	planStartDate	planEndDate	sessionDate	sessionDuration
PC001	01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP001	02/01/2022	28/02/2022	05/01/2022	60 minutes
PC001	01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP001	02/01/2022	28/02/2022	18/01/2022	90 minutes
PC002	10/02/2022	Xanax	Commonly prescribed to treat anxiety disorders and panic attacks by reducing excessive brain activity	Rp150.000,00		5 TP002	12/02/2022	30/04/2022	18/02/2022	60 minutes
PC002	10/02/2022	Xanax	Commonly prescribed to treat anxiety disorders and panic attacks by reducing excessive brain activity	Rp150.000,00		5 TP002	12/02/2022	30/04/2022	12/03/2022	45 minutes
PC003	05/03/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00		2 TP003	07/03/2022	31/05/2022	20/03/2022	90 minutes
PC004	20/04/2022	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		6 TP004	22/02/2023	31/12/2023	10/03/2023	50 minutes
PC004	20/04/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		2 TP004	22/02/2023	31/12/2023	10/03/2023	50 minutes
PC005	25/05/2022	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp120.000,00		7 TP005	04/05/2023	04/12/2023	15/04/2023	30 minutes
PC005	25/05/2022	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp120.000,00		7 TP005	04/05/2023	04/12/2023	15/04/2023	30 minutes
PC006	20/05/2022	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		4 TP006	26/05/2022	22/06/2022	15/07/2022	30 minutes
PC007	05/01/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		4 TP007	05/04/2023	22/05/2023	15/04/2023	60 minutes
PC008	10/02/2023	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00		3 TP008	15/07/2023	22/12/2023	10/08/2023	75 minutes
PC009	20/03/2023	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00		1 TP009	22/03/2023	12/05/2023	24/04/2023	30 minutes
PC010	01/01/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		2 TP010	04/01/2022	05/02/2022	20/01/2022	90 minutes
PC011	20/05/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00		5 TP011	23/05/2023	25/06/2023	22/06/2023	120 minutes
PC012	25/05/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP012	26/05/2022	28/06/2022	01/06/2022	90 minutes
PC013	22/07/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP013	23/07/2022	04/09/2022	02/08/2022	60 minutes
PC014	01/01/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		4 TP014	03/01/2023	20/03/2023	05/02/2023	120 minutes
PC015	03/05/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00		1 TP015	05/05/2022	06/06/2022	20/05/2022	45 minutes
PC016	05/10/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		4 TP016	07/10/2022	07/11/2022	20/10/2022	50 minutes
PC017	20/07/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		3 TP017	20/09/2023	20/10/2023	28/07/2023	40 minutes
PC018	08/02/2023	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp.120.000,00		7 TP018	09/02/2023	11/02/2023	10/02/2023	60 minutes
PC019	04/12/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00		5 TP019	05/12/2023	07/12/2023	06/12/2023	80 minutes
PC020	20/02/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00		3 TP020	20/03/2022	20/05/2022	30/04/2022	50 minutes
PC021	05/10/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP021	06/10/2023	08/03/2023	07/03/2023	75 minutes
PC022	02/07/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		4 TP022	03/07/2023	21/05/2023	14/04/2023	50 minutes
PC023	27/05/2023	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00		1 TP023	27/07/2023	09/07/2023	08/01/2023	100 minutes
PC024	05/10/2022	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		3 TP024	06/10/2022	08/10/2022	07/10/2022	70 minutes
PC025	22/02/2022	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		4 TP025	22/03/2022	05/10/2022	17/04/2022	90 minutes
PC026	10/05/2022	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp.120.000,00		7 TP026	15/10/2022	15/12/2022	15/11/2022	100minutes
PC027	17/07/2023	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00		5 TP027	20/07/2023	27/09/2023	14/08/2023	120 minutes
PC028	15/05/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00		3 TP028	15/06/2022	07/01/2022	25/06/2022	30 minutes
PC029	07/03/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP029	08/03/2023	10/03/2023	09/03/2023	60 minutes
PC030	27/07/2023	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00		3 TP030	27/08/2023	30/09/2023	15/09/2023	60 minutes
PC031	14/06/2022	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00		1 TP031	14/07/2022	09/07/2022	08/07/2022	90 minutes
PC032	28/02/2023	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00		3 TP032	29/03/2023	29/05/2022	29/04/2023	120 minutes
PC033	07/12/2022	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00		3 TP033	25/07/2022	17/09/2022	08/07/2022	75 minutes

2NF

Second Normal Form (2NF) adalah tahap di mana atribut *non-primary key* hanya tergantung pada *full primary key*. 2NF didasari atas konsep *full functional dependency*.

Syarat 2NF adalah sudah dalam bentuk 1NF dan atribut bukan kunci harus memiliki ketergantungan fungsional sepenuhnya terhadap *primary key*.

Second Normal Form

2NF

Tabel Evaluation-Patient-Psychiatrist-Prescription-Treatment Plan													
evaluationId(PK)	evaluationDate	patientName	patientGender	patientEmail	patientDOB	psychiatristName	psychiatristSpecialization	psychiatristEmail	prescriptionId	prescriptionDate	planId	planStartDate	planEndDate
EV001	01/01/2022	John Doe	Male	john.doe@gmail.com	15/05/1990	Smith	Psychiatry	smith@gmail.com	PC001	01/01/2022	TP001	02/01/2022	28/02/2022
EV002	10/02/2022	Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	Johnson	Psychiatry	johson@gmail.com	PC002	10/02/2022	TP002	12/02/2022	30/04/2022
EV003	05/03/2022	Sarah Smith	Female	sarah.smith@gmail.com	20/09/1985	Johnson	Psychiatry	johson@gmail.com	PC003	05/03/2022	TP003	07/03/2022	31/05/2022
EV004	20/04/2022	Michael Brown	Male	michael.brown@gmail.com	18/07/1988	Wilson	Psychopharmacology	wilson@gmail.com	PC004	20/04/2022	TP004	22/02/2023	31/12/2023
EV005	25/05/2022	Emily Johnson	Female	emily.johnson@gmail.com	12/03/2000	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com	PC005	25/05/2022	TP005	04/05/2023	04/12/2023
EV006	20/05/2022	Alex Johnson	Male	alex.johnson@gmail.com	25/07/1992	Wilson	Psychopharmacology	wilson@gmail.com	PC006	20/05/2022	TP006	26/05/2022	22/06/2022
EV007	05/01/2023	Yena	Female	yena@gmail.com	15/03/1990	Smith	Psychiatry	smith@gmail.com	PC007	05/01/2023	TP007	05/04/2023	22/05/2023
EV008	10/02/2023	Leo	Male	leo@gmail.com	22/06/1985	Johnson	Psychiatry	johson@gmail.com	PC008	10/02/2023	TP008	15/07/2023	22/12/2023
EV009	20/03/2023	Lina	Female	lina@gmail.com	12/09/1988	Johnson	Psychiatry	johson@gmail.com	PC009	20/03/2023	TP009	22/03/2023	12/05/2023
EV010	01/01/2022	Lilis	Female	lilis@gmail.com	15/05/1995	Sam	Psychiatry	sam.gmail.com	PC010	01/01/2022	TP010	04/01/2022	05/02/2022
EV011	20/05/2023	Ethan Miller	Male	ethan.miller@gmail.com	12/09/1980	Rizal	Psychopharmacology	rizal.gmail.com	PC011	20/05/2023	TP011	23/05/2023	25/06/2023
EV012	25/05/2022	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	Smith	Psychiatry	smith@gmail.com	PC012	25/05/2022	TP012	26/05/2022	28/06/2022
EV013	22/07/2022	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	Smith	Psychiatry	smith@gmail.com	PC013	22/07/2022	TP013	23/07/2022	04/09/2022
EV014	01/01/2023	Olivia Foster	Female	olivia.foster@gmail.com	11/06/1994	Wilson	Psychopharmacology	wilson@gmail.com	PC014	01/01/2023	TP014	03/01/2023	20/03/2023
EV015	03/05/2022	Liam Parker	Male	liam.parker@gmail.com	30/03/1985	Johnson	Psychiatry	johson@gmail.com	PC015	03/05/2022	TP015	05/05/2022	06/06/2022
EV016	05/10/2022	Benjamin Brooks	Male	benjamin.brooks@gmail.com	20/07/1999	Sam	Psychiatry	sam.gmail.com	PC016	05/10/2022	TP016	07/10/2022	07/11/2022
EV017	20/07/2023	Robert	Male	robert@gmail.com	11/10/2002	Wilson	Psychopharmacology	wilson@gmail.com	PC017	20/07/2023	TP017	20/09/2023	20/10/2023
EV018	08/02/2023	William	Male	william@gmail.com	09/12/2000	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com	PC018	08/02/2023	TP018	09/02/2023	11/02/2023
EV019	04/12/2023	Richard	Male	richard@gmail.com	19/01/1995	Rizal	Psychopharmacology	rizal.gmail.com	PC019	04/12/2023	TP019	05/12/2023	07/12/2023
EV020	20/02/2022	Christopher	Male	christopher@gmail.com	22/05/1988	Johnson	Psychiatry	johson@gmail.com	PC020	20/02/2022	TP020	20/03/2022	20/05/2022
EV021	05/10/2023	Jennifer	Female	jennifer@gmail.com	25/02/1978	Smith	Psychiatry	smith@gmail.com	PC021	05/10/2023	TP021	06/10/2023	08/03/2023
EV022	02/07/2023	Elizabeth	Female	elizabeth@gmail.com	23/08/1970	Sam	Psychiatry	sam.gmail.com	PC022	02/07/2023	TP022	03/07/2023	21/05/2023
EV023	27/05/2023	Emma Reynolds	Female	emma.reynolds@gmail.com	10/04/1999	Johnson	Psychiatry	johson@gmail.com	PC023	27/05/2023	TP023	27/07/2023	09/07/2023
EV024	05/10/2022	Amelia Taylor	Female	amelia.taylor@gmail.com	12/05/1978	Wilson	Psychopharmacology	wilson@gmail.com	PC024	05/10/2022	TP024	06/10/2022	08/10/2022
EV025	22/02/2022	Lily Peterson	Female	lily.peterson@gmail.com	08/07/1968	Sam	Psychiatry	sam.gmail.com	PC025	22/02/2022	TP025	22/03/2022	05/10/2022
EV026	10/05/2022	William Foster	Male	william.foster@gmail.com	05/07/1977	Emma Davis	Child and Adolescent Psychiatry	emma.davis@gmail.com	PC026	10/05/2022	TP026	15/10/2022	15/12/2022
EV027	17/07/2023	Jameson Porter	Male	jameson.porter@gmail.com	12/06/1982	Rizal	Psychopharmacology	rizal.gmail.com	PC027	17/07/2023	TP027	20/07/2023	27/09/2023
EV028	15/05/2022	Isabella	Female	isabella@gmail.com	17/07/1996	Johnson	Psychiatry	johson@gmail.com	PC028	15/05/2022	TP028	15/06/2022	07/01/2022
EV029	07/03/2023	Alexander	Male	alexander@gmail.com	24/04/2003	Smith	Psychiatry	smith@gmail.com	PC029	07/03/2023	TP029	08/03/2023	10/03/2023
EV030	27/07/2023	Scarlett Evans	Female	scarlett.evans@gmail.com	19/09/1999	Smith	Psychiatry	smith@gmail.com	PC030	27/07/2023	TP030	27/08/2023	30/09/2023
EV031	14/06/2022	Ella Bennett	Female	ella.bennett@gmail.com	23/03/1983	Johnson	Psychiatry	johson@gmail.com	PC031	14/06/2022	TP031	14/07/2022	09/07/2022
EV032	28/02/2023	Sophia	Female	sophia@gmail.com	22/07/1996	Wilson	Psychopharmacology	wilson@gmail.com	PC032	28/02/2023	TP032	29/03/2023	29/05/2022
EV033	07/12/2022	Noah Coleman	Male	noah.coleman@gmail.com	17/07/1977	Johnson	Psychiatry	johson@gmail.com	PC033	07/12/2022	TP033	25/07/2022	17/09/2022

2NF

Tabel Diagnosis Detail

evaluationId(PK)(FK)	diagnosisId(PK)(FK)	diagnosisSeverity
EV001	DG001	5
EV002	DG002	8
EV003	DG003	5
EV004	DG004	10
EV005	DG001	3
EV005	DG005	4
EV006	DG004	5
EV007	DG001	6
EV008	DG002	8
EV009	DG003	2
EV010	DG006	3
EV011	DG007	6
EV012	DG001	6
EV013	DG006	7
EV014	DG004	8
EV015	DG003	1
EV016	DG006	4
EV017	DG004	5
EV018	DG005	6
EV019	DG007	4
EV020	DG002	7
EV021	DG001	8
EV022	DG006	7
EV023	DG003	5
EV024	DG004	7
EV025	DG006	5
EV026	DG005	4
EV027	DG007	7
EV028	DG002	5
EV029	DG001	7
EV030	DG001	4
EV031	DG003	8
EV032	DG006	9
EV033	DG002	4

Tabel Diagnosis

diagnosisId(PK)	diagnosisName
DG001	Depression
DG002	Anxiety Disorder
DG003	Bipolar Disorder
DG004	Schizophrenia
DG005	ADHD
DG006	PTSD
DG007	Panic Disorder

2NF

Tabel Medicine			
medicineId(PK)	medicineName	medicineDesc	medicinePrice
MD001	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00
MD002	Xanax	Commonly prescribed to treat anxiety disorders and panic attacks by reducing excessive brain activity	Rp150.000,00
MD003	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00
MD004	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00
MD005	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp120.000,00
MD006	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00
MD007	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00

2NF

Tabel Prescription Detail

prescriptionId(PK)(FK)	medicineId(PK)(FK)	medicineQuantity
PC001	MD001	3
PC002	MD002	5
PC003	MD003	2
PC004	MD004	6
PC004	MD001	2
PC005	MD005	7
PC006	MD004	4
PC007	MD001	4
PC008	MD006	3
PC009	MD003	1
PC010	MD001	2
PC011	MD007	5
PC012	MD001	3
PC013	MD001	3
PC014	MD004	4
PC015	MD003	1
PC016	MD001	4
PC017	MD004	3
PC018	MD005	7
PC019	MD007	5
PC020	MD006	3
PC021	MD001	3
PC022	MD001	4
PC023	MD003	1
PC024	MD004	3
PC025	MD001	4
PC026	MD005	7
PC027	MD007	5
PC028	MD006	3
PC029	MD001	3
PC030	MD001	3
PC031	MD003	1
PC032	MD004	3
PC033	MD006	3

Tabel Therapy Session

sessionId(PK)	planId(FK)	sessionDate	sessionDuration
TS001	TP001	05/01/2022	60 minutes
TS002	TP001	18/01/2022	90 minutes
TS003	TP002	18/02/2022	60 minutes
TS004	TP002	12/03/2022	45 minutes
TS005	TP003	20/03/2022	90 minutes
TS006	TP004	10/03/2023	50 minutes
TS006	TP004	10/03/2023	50 minutes
TS007	TP005	15/04/2023	30 minutes
TS008	TP006	15/07/2022	30 minutes
TS009	TP007	15/04/2023	60 minutes
TS010	TP008	10/08/2023	75 minutes
TS011	TP009	24/04/2023	30 minutes
TS012	TP010	20/01/2022	90 minutes
TS013	TP011	22/06/2023	120 minutes
TS014	TP012	01/06/2022	90 minutes
TS015	TP013	02/08/2022	60 minutes
TS016	TP014	05/02/2023	120 minutes
TS017	TP015	20/05/2022	45 minutes
TS018	TP016	20/10/2022	50 minutes
TS019	TP017	28/07/2023	40 minutes
TS020	TP018	10/02/2023	60 minutes
TS021	TP019	06/12/2023	80 minutes
TS022	TP020	30/04/2022	50 minutes
TS023	TP021	07/03/2023	75 minutes
TS024	TP022	14/04/2023	50 minutes
TS025	TP023	08/01/2023	100 minutes
TS026	TP024	07/10/2022	70 minutes
TS027	TP025	17/04/2022	90 minutes
TS028	TP026	15/11/2022	100 minutes
TS029	TP027	14/08/2023	120 minutes
TS030	TP028	25/06/2022	30 minutes
TS031	TP029	09/03/2023	60 minutes
TS032	TP030	15/09/2023	60 minutes
TS033	TP031	08/07/2022	90 minutes
TS034	TP032	29/04/2023	120 minutes
TS035	TP033	08/07/2022	75 minutes

3NF

Third Normal Form (3NF) adalah tahap normalisasi yang menghilangkan *transitive dependency*.

Syarat 3NF adalah harus dalam bentuk 2NF terlebih dahulu dan atribut yang bukan kunci haruslah tidak memiliki ketergantungan secara transitif terhadap atribut bukan kunci lainnya.

Third Normal Form

3NF

Tabel Evaluation			
evaluationId(PK)	patientEmail(FK)	psychiatristEmail(FK)	evaluationDate
EV001	john.doe@gmail.com	smith@gmail.com	01/01/2022
EV002	sarah.smith@gmail.com	johson@gmail.com	10/02/2022
EV003	sarah.smith@gmail.com	johson@gmail.com	05/03/2022
EV004	michael.brown@gmail.com	wilson@gmail.com	20/04/2022
EV005	emily.johnson@gmail.com	emma.davis@gmail.com	25/05/2022
EV006	alex.johnson@gmail.com	wilson@gmail.com	20/05/2022
EV007	yena@gmail.com	smith@gmail.com	05/01/2023
EV008	leo@gmail.com	johson@gmail.com	10/02/2023
EV009	lina@gmail.com	johson@gmail.com	20/03/2023
EV010	lilis@gmail.com	sam.gmail.com	01/01/2022
EV011	ethan.miller@gmail.com	rizal.gmail.com	20/05/2023
EV012	olivia.foster@gmail.com	smith@gmail.com	25/05/2022
EV013	olivia.foster@gmail.com	smith@gmail.com	22/07/2022
EV014	olivia.foster@gmail.com	wilson@gmail.com	01/01/2023
EV015	liam.parker@gmail.com	johson@gmail.com	03/05/2022
EV016	benjamin.brooks@gmail.com	sam.gmail.com	05/10/2022
EV017	robert@gmail.com	wilson@gmail.com	20/07/2023
EV018	william@gmail.com	emma.davis@gmail.com	08/02/2023
EV019	richard@gmail.com	rizal.gmail.com	04/12/2023
EV020	christopher@gmail.com	johson@gmail.com	20/02/2022
EV021	jennifer@gmail.com	smith@gmail.com	05/10/2023
EV022	elizabeth@gmail.com	sam.gmail.com	02/07/2023
EV023	emma.reynolds@gmail.com	johson@gmail.com	27/05/2023
EV024	amelia.taylor@gmail.com	wilson@gmail.com	05/10/2022
EV025	lily.peterson@gmail.com	sam.gmail.com	22/02/2022
EV026	william.foster@gmail.com	emma.davis@gmail.com	10/05/2022
EV027	jameson.porter@gmail.com	rizal.gmail.com	17/07/2023
EV028	isabella@gmail.com	johson@gmail.com	15/05/2022
EV029	alexander@gmail.com	smith@gmail.com	07/03/2023
EV030	scarlett.evans@gmail.com	smith@gmail.com	27/07/2023
EV031	ella.bennett@gmail.com	johson@gmail.com	14/06/2022
EV032	sophia@gmail.com	wilson@gmail.com	28/02/2023
EV033	noah.coleman@gmail.com	johson@gmail.com	07/12/2022

Tabel Patient			
patientEmail(PK)	patientName	patientGender	patientDOB
john.doe@gmail.com	John Doe	Male	15/05/1990
sarah.smith@gmail.com	Sarah Smith	Female	20/09/1985
michael.brown@gmail.com	Michael Brown	Male	18/07/1988
emily.johnson@gmail.com	Emily Johnson	Female	12/03/2000
alex.johnson@gmail.com	Alex Johnson	Male	25/07/1992
yena@gmail.com	Yena	Female	15/03/1990
leo@gmail.com	Leo	Male	22/06/1985
lina@gmail.com	Lina	Female	12/09/1988
lilis@gmail.com	Lilis	Female	15/05/1995
ethan.miller@gmail.com	Ethan Miller	Male	12/09/1980
olivia.foster@gmail.com	Olivia Foster	Female	11/06/1994
liam.parker@gmail.com	Liam Parker	Male	30/03/1985
benjamin.brooks@gmail.com	Benjamin Brooks	Male	20/07/1999
robert@gmail.com	Robert	Male	11/10/2002
william@gmail.com	William	Male	09/12/2000
richard@gmail.com	Richard	Male	19/01/1995
christopher@gmail.com	Christopher	Male	22/05/1988
jennifer@gmail.com	Jennifer	Female	25/02/1978
elizabeth@gmail.com	Elizabeth	Female	23/08/1970
emma.reynolds@gmail.com	Emma Reynolds	Female	10/04/1999
amelia.taylor@gmail.com	Amelia Taylor	Female	12/05/1978
lily.peterson@gmail.com	Lily Peterson	Female	08/07/1968
william.foster@gmail.com	William Foster	Male	05/07/1977
jameson.porter@gmail.com	Jameson Porter	Male	12/06/1982
isabella@gmail.com	Isabella	Female	17/07/1996
alexander@gmail.com	Alexander	Male	24/04/2003
scarlett.evans@gmail.com	Scarlett Evans	Female	19/09/1999
ella.bennett@gmail.com	Ella Bennett	Female	23/03/1983
sophia@gmail.com	Sophia	Female	22/07/1996
noah.coleman@gmail.com	Noah Coleman	Male	17/07/1977

3NF

Tabel Psychiatrist

psychiatristEmail(PK)	psychiatristName	psychiatristSpecialization
smith@gmail.com	Smith	Psychiatry
johson@gmail.com	Johnson	Psychiatry
wilson@gmail.com	Wilson	Psychopharmacology
emma.davis@gmail.com	Emma Davis	Child and Adolescent Psychiatry
sam.gmail.com	Sam	Psychiatry
rizal.gmail.com	Rizal	Psychopharmacology

Tabel Prescription		
prescriptionId(PK)	evaluationId(FK)	prescriptionDate
PC001	EV001	01/01/2022
PC002	EV002	10/02/2022
PC003	EV003	05/03/2022
PC004	EV004	20/04/2022
PC005	EV005	25/05/2022
PC006	EV006	20/05/2022
PC007	EV007	05/01/2023
PC008	EV008	10/02/2023
PC009	EV009	20/03/2023
PC010	EV010	01/01/2022
PC011	EV011	20/05/2023
PC012	EV012	25/05/2022
PC013	EV013	22/07/2022
PC014	EV014	01/01/2023
PC015	EV015	03/05/2022
PC016	EV016	05/10/2022
PC017	EV017	20/07/2023
PC018	EV018	08/02/2023
PC019	EV019	04/12/2023
PC020	EV020	20/02/2022
PC021	EV021	05/10/2023
PC022	EV022	02/07/2023
PC023	EV023	27/05/2023
PC024	EV024	05/10/2022
PC025	EV025	22/02/2022
PC026	EV026	10/05/2022
PC027	EV027	17/07/2023
PC028	EV028	15/05/2022
PC029	EV029	07/03/2023
PC030	EV030	27/07/2023
PC031	EV031	14/06/2022
PC032	EV032	28/02/2023
PC033	EV033	07/12/2022

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Tabel Treatment Plan			
planId(PK)	evaluationId(FK)	planStartDate	planEndDate
TP001	EV001	02/01/2022	28/02/2022
TP002	EV002	12/02/2022	30/04/2022
TP003	EV003	07/03/2022	31/05/2022
TP004	EV004	22/02/2023	31/12/2023
TP005	EV005	04/05/2023	04/12/2023
TP006	EV006	26/05/2022	22/06/2022
TP007	EV007	05/04/2023	22/05/2023
TP008	EV008	15/07/2023	22/12/2023
TP009	EV009	22/03/2023	12/05/2023
TP010	EV010	04/01/2022	05/02/2022
TP011	EV011	23/05/2023	25/06/2023
TP012	EV012	26/05/2022	28/06/2022
TP013	EV013	23/07/2022	04/09/2022
TP014	EV014	03/01/2023	20/03/2023
TP015	EV015	05/05/2022	06/06/2022
TP016	EV016	07/10/2022	07/11/2022
TP017	EV017	20/09/2023	20/10/2023
TP018	EV018	09/02/2023	11/02/2023
TP019	EV019	05/12/2023	07/12/2023
TP020	EV020	20/03/2022	20/05/2022
TP021	EV021	06/10/2023	08/03/2023
TP022	EV022	03/07/2023	21/05/2023
TP023	EV023	27/07/2023	09/07/2023
TP024	EV024	06/10/2022	08/10/2022
TP025	EV025	22/03/2022	05/10/2022
TP026	EV026	15/10/2022	15/12/2022
TP027	EV027	20/07/2023	27/09/2023
TP028	EV028	15/06/2022	07/01/2022
TP029	EV029	08/03/2023	10/03/2023
TP030	EV030	27/08/2023	30/09/2023
TP031	EV031	14/07/2022	09/07/2022
TP032	EV032	29/03/2023	29/05/2022
TP033	EV033	25/07/2022	17/09/2022

Tabel Diagnosis Detail		
evaluationId(PK)(FK)	diagnosisId(PK)(FK)	diagnosisSeverity
EV001	DG001	5
EV002	DG002	8
EV003	DG003	5
EV004	DG004	10
EV005	DG001	3
EV005	DG005	4
EV006	DG004	5
EV007	DG001	6
EV008	DG002	8
EV009	DG003	2
EV010	DG006	3
EV011	DG007	6
EV012	DG001	6
EV013	DG006	7
EV014	DG004	8
EV015	DG003	1
EV016	DG006	4
EV017	DG004	5
EV018	DG005	6
EV019	DG007	4
EV020	DG002	7
EV021	DG001	8
EV022	DG006	7
EV023	DG003	5
EV024	DG004	7
EV025	DG006	5
EV026	DG005	4
EV027	DG007	7
EV028	DG002	5
EV029	DG001	7
EV030	DG001	4
EV031	DG003	8
EV032	DG006	9
EV033	DG002	4

Tabel Diagnosis

diagnosisId(PK)	diagnosisName
DG001	Depression
DG002	Anxiety Disorder
DG003	Bipolar Disorder
DG004	Schizophrenia
DG005	ADHD
DG006	PTSD
DG007	Panic Disorder

3NF

Tabel Medicine				
medicineId(PK)	medicineName	medicineDesc	medicinePrice	
MD001	Prozac	Antidepressant belonging to the selective serotonin reuptake inhibitor (SSRI) class	Rp100.000,00	
MD002	Xanax	Commonly prescribed to treat anxiety disorders and panic attacks by reducing excessive brain activity	Rp150.000,00	
MD003	Lithium Carbonate	Used to prevent or treat manic episodes in people with bipolar disorder	Rp200.000,00	
MD004	Risperdal	Balance the level of dopamine and serotonin in brain	Rp180.000,00	
MD005	Adderall	Treatment of attention deficit hyperactivity disorder and narcolepsy	Rp120.000,00	
MD006	Alprazolam	Treat anxiety disorder and panic disorder	Rp550.000,00	
MD007	Paroxetine	Enhances serotonin levels by blocking its reuptake in the brain	Rp80.000,00	

3NF

Tabel Prescription Detail		
prescriptionId(PK)(FK)	medicineId(PK)(FK)	medicineQuantity
PC001	MD001	3
PC002	MD002	5
PC003	MD003	2
PC004	MD004	6
PC004	MD001	2
PC005	MD005	7
PC006	MD004	4
PC007	MD001	4
PC008	MD006	3
PC009	MD003	1
PC010	MD001	2
PC011	MD007	5
PC012	MD001	3
PC013	MD001	3
PC014	MD004	4
PC015	MD003	1
PC016	MD001	4
PC017	MD004	3
PC018	MD005	7
PC019	MD007	5
PC020	MD006	3
PC021	MD001	3
PC022	MD001	4
PC023	MD003	1
PC024	MD004	3
PC025	MD001	4
PC026	MD005	7
PC027	MD007	5
PC028	MD006	3
PC029	MD001	3
PC030	MD001	3
PC031	MD003	1
PC032	MD004	3
PC033	MD006	3

Tabel Therapy Session			
sessionId(PK)	planId(FK)	sessionDate	sessionDuration
TS001	TP001	05/01/2022	60 minutes
TS002	TP001	18/01/2022	90 minutes
TS003	TP002	18/02/2022	60 minutes
TS004	TP002	12/03/2022	45 minutes
TS005	TP003	20/03/2022	90 minutes
TS006	TP004	10/03/2023	50 minutes
TS006	TP004	10/03/2023	50 minutes
TS007	TP005	15/04/2023	30 minutes
TS008	TP006	15/07/2022	30 minutes
TS009	TP007	15/04/2023	60 minutes
TS010	TP008	10/08/2023	75 minutes
TS011	TP009	24/04/2023	30 minutes
TS012	TP010	20/01/2022	90 minutes
TS013	TP011	22/06/2023	120 minutes
TS014	TP012	01/06/2022	90 minutes
TS015	TP013	02/08/2022	60 minutes
TS016	TP014	05/02/2023	120 minutes
TS017	TP015	20/05/2022	45 minutes
TS018	TP016	20/10/2022	50 minutes
TS019	TP017	28/07/2023	40 minutes
TS020	TP018	10/02/2023	60 minutes
TS021	TP019	06/12/2023	80 minutes
TS022	TP020	30/04/2022	50 minutes
TS023	TP021	07/03/2023	75 minutes
TS024	TP022	14/04/2023	50 minutes
TS025	TP023	08/01/2023	100 minutes
TS026	TP024	07/10/2022	70 minutes
TS027	TP025	17/04/2022	90 minutes
TS028	TP026	15/11/2022	100 minutes
TS029	TP027	14/08/2023	120 minutes
TS030	TP028	25/06/2022	30 minutes
TS031	TP029	09/03/2023	60 minutes
TS032	TP030	15/09/2023	60 minutes
TS033	TP031	08/07/2022	90 minutes
TS034	TP032	29/04/2023	120 minutes
TS035	TP033	08/07/2022	75 minutes

BCNF

Pada normalisasi 3NF, untuk relasi $X \rightarrow Y$, terdapat kemungkinan X merupakan non key sedangkan Y merupakan superkey, normalisasi BCNF digunakan untuk menyelesaikan masalah ini.

Boyce-Codd Normal Form

Suatu relasi dikatakan dalam bentuk BCNF jika tabel dalam bentuk 3NF dan untuk semua relasi $X \rightarrow Y$, X merupakan superkey

KESIMPULAN

Dalam pembuatan aplikasi, khususnya MindEase sebagai penyedia layanan kesehatan daring yang dapat menjangkau semua kalangan, pengembang perlu menyediakan sistem basis data yang mumpuni untuk menampung data-data pengguna.



SARAN



Dalam melakukan analisis, sebaiknya database dibuat langsung di suatu server khusus basis data, yang dioperasikan dengan menggunakan bahasa pemrograman SQL.

TERIMA KASIH

