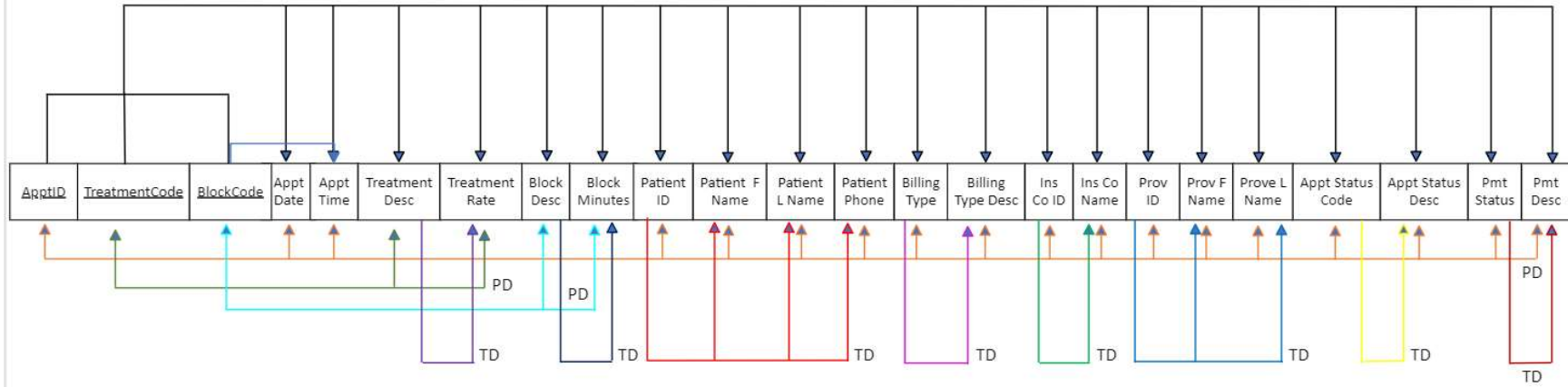1a. & 1b. APPTDETAIL

Appt ID	Appt Date	Appt Time	Treatment Code	Treatment Desc	Treatment Rate	Block Code	Block Desc	Block Minutes	Patient ID	Patient F Name	Patient L Name	I	Billing Type	Billing Type Desc	Ins Co ID	Ins Co Name	Prov ID	Prov F Name	Prov L Name	Appt Status Code	Appt Status Desc	Pmt Status	Pmt Desc
101	2/19/2024	9:00 AM	NP	New Patient	$45	L1	Level 1	15	101	Wesley	Tanner	(817)555-1193	I	Insurance	323	Humana	2	Michael	Smith	CM	Complete	PD	Paid in Full
101	2/19/2024	9:00 AM	GBP	General Back Pain	$60	L2	Level 2	20	101	Wesley	Tanner	(817)555-1193	I	Insurance	323	Humana	2	Michael	Smith	CM	Complete	PD	Paid in Full
101	2/19/2024	9:00 AM	XR	X-Ray	$250	L2	Level 2	20	101	Wesley	Tanner	(817)555-1193	I	Insurance	323	Humana	2	Michael	Smith	CM	Complete	PD	Paid in Full
102	2/19/2024	9:00 AM	PSF	Post-Surgery Follow Up	$30	L1	Level 1	15	100	Brenda	Rhodes	(214)555-9191	I	Insurance	129	Blue Cross	5	Janice	May	CM	Complete	PP	Partial Pmt
102	2/19/2024	9:00 AM	SR	Suture Removal	$50	L2	Level 2	20	100	Brenda	Rhodes	(214)555-9191	I	Insurance	129	Blue Cross	5	Janice	May	CM	Complete	PP	Partial Pmt
103	2/19/2024	10:00 AM	PSF	Post-Surgery Follow Up	$30	L1	Level 1	15	15	Jeff	Miner	(469)555-2301	SP	Self-Pay			2	Michael	Smith	CM	Complete	PD	Paid in Full
103	2/19/2024	10:00 AM	SR	Suture Removal	$50	L2	Level 2	20	15	Jeff	Miner	(469)555-2301	SP	Self-Pay			2	Michael	Smith	CM	Complete	PD	Paid in Full
104	2/19/2024	10:30 AM	PT30	Physical Therapy 30	$60	L3	Level 3	30	77	Kim	Jackson	(817)555-4911	WC	Worker's Comp	210	State Farm	1	Kay	Jones	CM	Complete	PD	Paid in Full
105	2/19/2024	10:30 AM	NP	New Patient	$45	L1	Level 1	15	119	Mary	Vaughn	(817)555-2334	I	Insurance	129	Blue Cross	2	Michael	Smith	CM	Complete	PP	Partial Pmt
105	2/19/2024	10:30 AM	AI	Back Injury	$60	L2	Level 2	20	119	Mary	Vaughn	(817)555-2334	I	Insurance	129	Blue Cross	2	Michael	Smith	CM	Complete	PP	Partial Pmt
106	2/19/2024	10:30 AM	PT60	Physical Therapy 60	$110	L4	Level 4	60	97	Chris	Mancha	(469)555-3440	SP	Self-Pay			3	Ray	Schultz	CM	Complete	NP	Not Paid
107	2/19/2024	11:30 AM	PT30	Physical Therapy 30	$60	L3	Level 3	30	28	Renee	Walker	(214)555-9285	I	Insurance	129	Blue Cross	3	Ray	Schultz	CN	Confirmed	PP	Partial Pmt
108	2/19/2024	11:30 AM	GBP	General Back Pain	$60	L2	Level 2	20	105	Johnny	Redmond	(214)555-1084	I	Insurance	323	Humana	2	Michael	Smith	CN	Confirmed	NP	Not Paid
109	2/19/2024	2:00 PM	PSF	Post-Surgery Follow Up	$30	L1	Level 1	15	84	James	Clayton	(214)555-9285	I	Insurance	135	TriCare	5	Janice	May	NC	Not Confirmed	NP	Not Paid
109	2/19/2024	2:00 PM	SR	Suture Removal	$50	L2	Level 2	20	84	James	Clayton	(214)555-9285	I	Insurance	135	TriCare	5	Janice	May	NC	Not Confirmed	NP	Not Paid
110	2/20/2024	8:30 AM	PT60	Physical Therapy 60	$110	L4	Level 4	60	84	James	Clayton	(214)555-9285	I	Insurance	135	TriCare	3	Ray	Schultz	NC	Not Confirmed	NP	Not Paid
111	2/20/2024	8:30 AM	NP	New Patient	$45	L1	Level 1	15	23	Shelby	Davis	(817)555-1198	WC	Worker's Comp	323	Humana	5	Janice	May	CN	Confirmed	NP	Not Paid
111	2/20/2024	8:30 AM	HP	Hip Pain	$60	L2	Level 2	20	23	Shelby	Davis	(817)555-1198	WC	Worker's Comp	323	Humana	5	Janice	May	CN	Confirmed	NP	Not Paid
111	2/20/2024	8:30 AM	XR	X-Ray	$250	L2	Level 2	20	23	Shelby	Davis	(817)555-1198	WC	Worker's Comp	323	Humana	5	Janice	May	CN	Confirmed	NP	Not Paid

1c.

APPTDETAIL (ApptID, TreatmentCode, BlockCode, ApptDate, ApptTime, TreatmentDesc, TreatmentRate, BlockDesc, BlockMinutes, PatientID, PatientFName, PatientLName, PatientPhone, BillingType, BillingTypeDesc, InsCoID, InsCoName, ProvID, ProvFName, ProvLName, ApptStatusCode, ApptStatusDesc, PmtStatus, PmtDesc)

1d.   Dependency Diagram for 1NF

APPTDETAIL

ApptID	TreatmentCode	BlockCode	Appt Date	Appt Time	Treatment Desc	Treatment Rate	Block Desc	Block Minutes	Patient ID	Patient F Name	Patient L Name	Patient Phone	Billing Type	Billing Type Desc	Ins Co ID	Ins Co Name	Prov ID	Prov F Name	Prove L Name	Appt Status Code	Appt Status Desc	Pmt Status	Pmt Desc

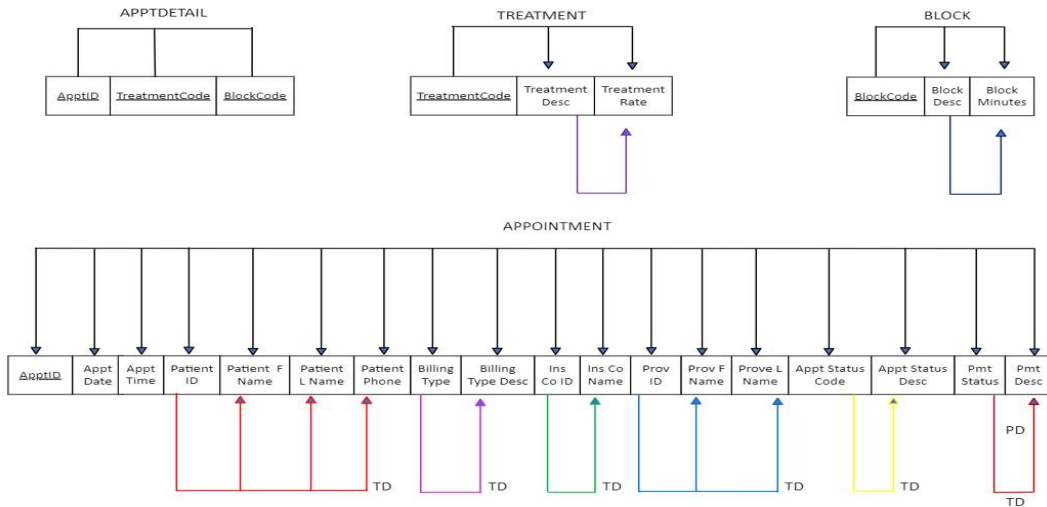2a.   Table Structure Format for 2NF

APPTDETAIL (ApptID, TreatmentCode, BlockCode)

APPOINTMENT (ApptID, ApptDate, ApptTime, PatientID, PatientFName, PatientLName, PatientPhone, BillingType, BillingTypeDesc, InsCoID, InsCoName, ProvID, ProvFName, ProvLName, ApptStatusCode, ApptStatusDesc, PmtStatus, PmtDesc)

TREATMENT (TreatmentCode, TreatmentDesc, TreatmentRate)
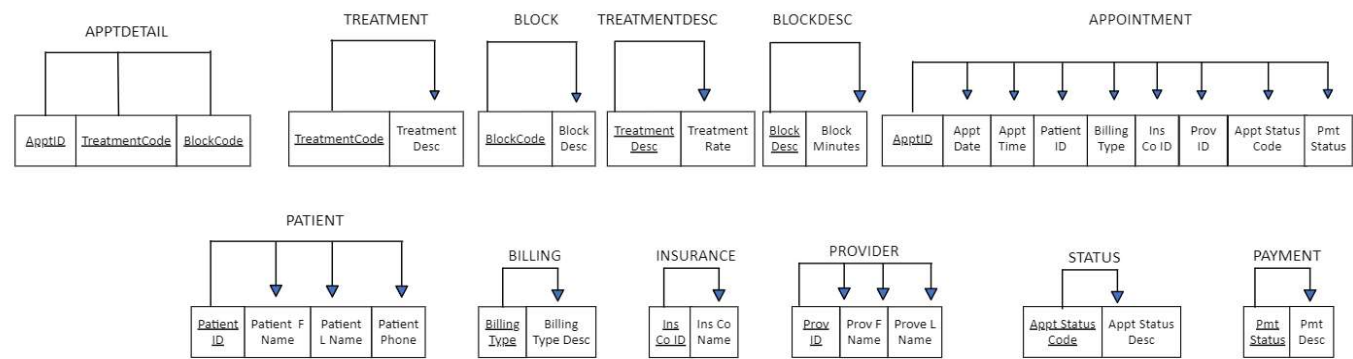
BLOCK (BlockCode, BlockDesc, BlockMinutes)

2b.   Dependency Diagram for 2NF

APPTDETAIL

ApptID	TreatmentCode	BlockCode

TREATMENT

TreatmentCode	Treatment Desc	Treatment Rate

BLOCK

BlockCode	Block Desc	Block Minutes

APPOINTMENT

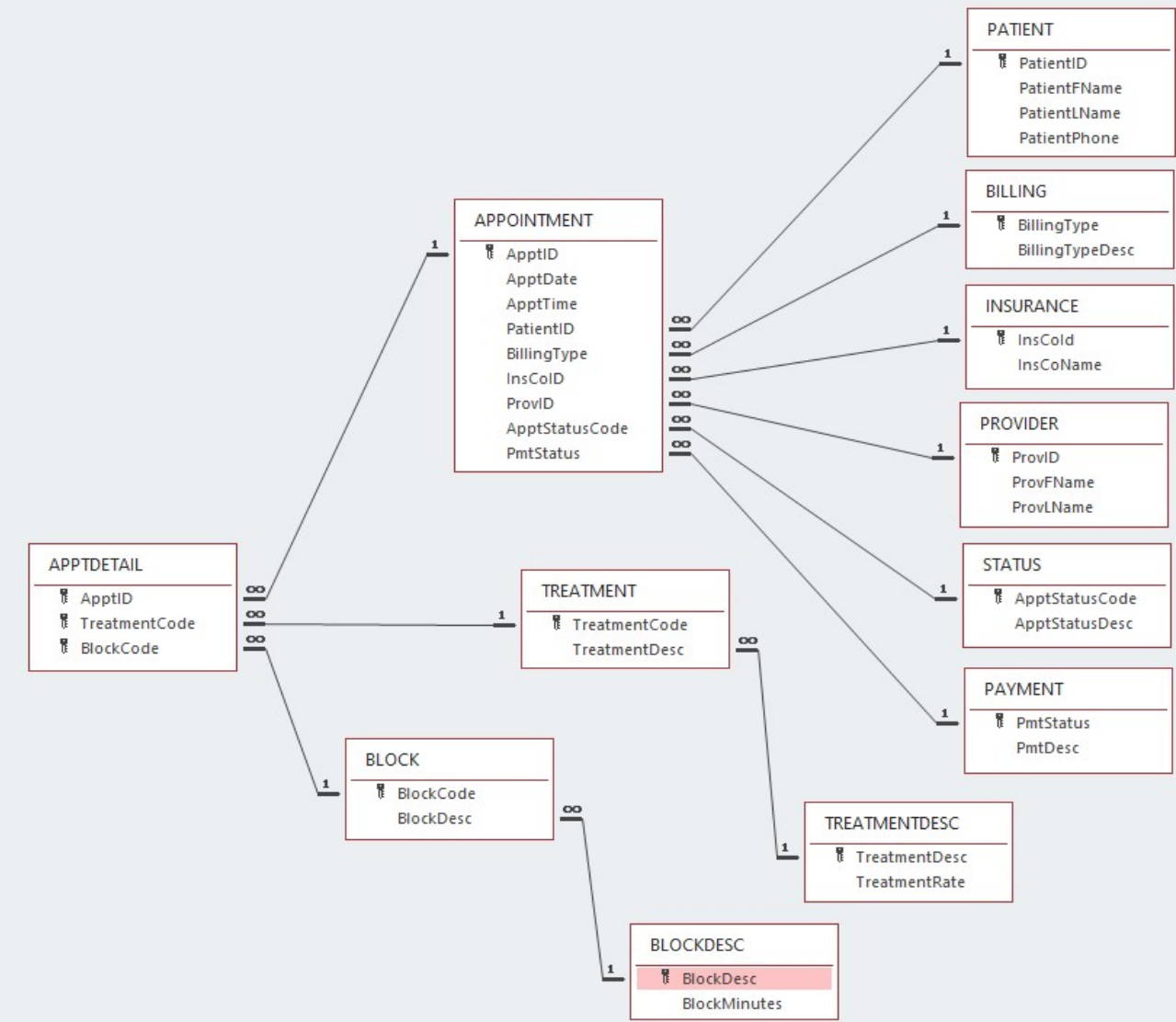| ApptID	Appt Date	Appt Time	Patient ID	Patient F Name	Patient L Name	Patient Phone	Billing Type	Billing Type Desc	Ins Co ID	Ins Co Name	Prov ID	Prov F Name	Prove L Name	Appt Status Code	Appt Status Desc	Pmt Status	Pmt Desc

3a.   Table Structure format for 3NF
APPTDETAIL (ApptID, TreatmentCode, BlockCode)
TREATMENT (TreatmentCode, TreatmentDesc)
BLOCK (BlockCode, BlockDesc)
TREATMENTDESC (TreatmentDesc, TreatmentRate)
BLOCKDESC (BlockDesc, BlockMinutes)
APPOINTMENT (ApptID, ApptDate, ApptTime, PatientID, BillingType, InsCoID, ProvID, ApptStatusCode, PmtStatus)
PATIENT (PatientID, PatientFName, PatientLName, PatientPhone)
BILLING (BillingType, BillingTypeDesc)
INSURANCE (InsCoID, InsCoName)
PROVIDER (ProvID, ProvFName, ProvLName)
STATUS (ApptStatusCode, ApptStatusDesc)
PAYMENT (PmtStatus, PmtDesc)

3b.   Dependency Diagrams for 3NF

4a.　Relational Schema

PATIENT
- 🔑 PatientID
- PatientFName
- PatientLName
- PatientPhone

BILLING
- 🔑 BillingType
- BillingTypeDesc

INSURANCE
- 🔑 InsCoId
- InsCoName

PROVIDER
- 🔑 ProvID
- ProvFName
- ProvLName

STATUS
- 🔑 ApptStatusCode
- ApptStatusDesc

PAYMENT
- 🔑 PmtStatus
- PmtDesc

APPOINTMENT
- 🔑 ApptID
- ApptDate
- ApptTime
- PatientID
- BillingType
- InsCoID
- ProvID
- ApptStatusCode
- PmtStatus

APPTDETAIL
- 🔑 ApptID
- 🔑 TreatmentCode
- 🔑 BlockCode

TREATMENT
- 🔑 TreatmentCode
- TreatmentDesc

TREATMENTDESC
- 🔑 TreatmentDesc
- TreatmentRate

BLOCK
- 🔑 BlockCode
- BlockDesc

BLOCKDESC
- 🔑 BlockDesc
- BlockMinutes

4b.   Entity Relationship Diagram