BINAR PROJECT

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|  | | |  | |
| **Jenis layanan** | | | Membuat layanan catatan mengajar. Di dalamnya dapat melakukan:   1. Presensi siswa pada tanggal tertentu 2. Memberikan nilai 3. Memberikan catatan kepada setiap siswa | |
| file model: classModel  file controller: classController | | | daftar kelas:   1. Create kelas 1-3 TOI 2. Read kelas 1-3 TOI 3. Update kelas 1-3 TOI 4. Delete kelas 1-3 TOI   Kelas 1 TOI: X TOI 1 & X TOI 2  Kelas 2 TOI: XI TOI 1 & XI TOI 2  Kelas 3 TOI: XII TOI 1 & XII TOI 2  Total 6 kelas. | |
| teachingNotesModel  teachingNotesController | | | Catatan mengajar:   1. Create catatan mengajar 2. Read catatan mengajar 3. Update catatan mengajar 4. Delete catatan mengajar | |
| teacherModel  teacherController  mapelModel  mapelController | | | Guru: CRUD Guru  Mapel: CRUD Mapel | |
| studentModel  studentController | | | Siswa:   1. Create siswa 2. Read siswa 3. Update siswa 4. Delete siswa | |
| FILES | | | 1. classModel 2. teachingNotesModel 3. teacherModel 4. mapelModel 5. studentModel 6. classController 7. teachingNotesController 8. teacherController 9. mapelController 10. studentController | |
|  | | | Data siswa:   1. Nama 2. Nis 3. Jenis kelamin | |
|  | | | Data Guru:   1. Nama 2. NIP 3. Jenis Kelamin | |
|  | | | Data Mata Pelajaran:   1. Nama mapel | |
|  | | | Data catatan mengajar:   1. Presensi (hadir/izin/sakit/alpa) 2. Mata Pelajaran(SKI, SKE) 3. Materi(tergantung maple) 4. Nilai (isinya opsional) 5. Catatan setiap siswa (isinya opsional) 6. guru 7. jam(jam 07:00 dsb.) 8. tanggal mengajar 9. tahun ajaran(2024/2025) | |
|  | | |  | |
| Data yg dikelola di server | | |  | |
|  | | | 1. Data kelas 2. Data siswa kelas 1-3 TOI 3. Data catatan mengajar 4. Data guru 5. Data mapel 6. Data user | |
| **Alur kerja API** | | | 1. Kelas: get /classes, get /classes/:id, post /classes, delete /classes/:id, put /classes/:id 2. Data siswa: get /classes/student, /classes/student/:id, /classes/student/class/:id, post /classes/student, delete /classes/student/:id, put /classes/student/:id 3. Catatan mengajar: get /teaching\_notes, get /teaching\_notes/:id, post /teaching\_notes, delete /teaching\_notes/:id, put /teaching\_notes/:id 4. Guru: get /teacher, get /teacher/:id, post /teacher, delete /teacher/:id, put /teacher/:id 5. Mata pelajaran: get /mata\_pelajaran, get /mata\_pelajaran/:id, post /mata\_pelajaran, delete /mata\_pelajaran/:id, put /mata\_pelajaran/:id 6. User: get /user, get /user/:id, post /user, delete /user/:id, put /user/:id | |
| GET  kelas | | | 1. Read daftar kelas(semua kelas dapat dilihat beserta mapelnya). /classes 2. Read kelas by id. /classes/:id | |
| GET  Data siswa | | | 1. Read siswa. /classes/student 2. Read siswa by class id. /classes/student/class/:id 3. Read siswa by id. /classes/student/:id | |
| GET  Catatan mengajar | | | 1. Read catatan mengajar. /teaching\_notes 2. Read by id. /teaching\_notes/:id | |
| GET  Guru | | | 1. Read daftar guru. /teacher 2. Read by id: /teacher/:id | |
| Get  Mata pelajaran | | | 1. Read mata Pelajaran. /course 2. Read by id: /course/:id | |
|  | | |  | |
| POST  kelas | | | 1. Create kelas(buat kelas pada jenjang tertentu, kelas X TOI 1/XI TOI 1). /classes. | |
| POST  Data siswa | | | 1. Create siswa. /classes/student/:id | |
| POST  Catatan mengajar | | | 1. Create catatan mengajar. /teaching\_notes | |
| POST  Guru | | | 1. Create guru. /teacher | |
| POST  Mata Pelajaran | | | 1. Create mapel baru. /course | |
|  | | |  | |
| DELETE  kelas | | | 1. Delete kelas(hapus kelas tertentu sesuai jenjang). /classes/:id | |
| DELETE  Data siswa | | | 1. Delete siswa. /classes/student/:id | |
| DELETE  Catatan mengajar | | | 1. Delete catatan mengajar. /teaching\_notes/:id | |
| DELETE  Guru | | | 1. Delete guru. /teacher/:id | |
| DELETE  Mata Pelajaran | | | 1. Delete mapel. /course/:id | |
|  | | |  | |
| PUT  Kelas | | | 1. Update kelas. /classes/:id | |
| PUT  Data siswa | | | 1. Update siswa. /classes/student/:id | |
| PUT  Catatan mengajar | | | 1. Update catatan mengajar. /teaching\_note/:id | |
| PUT  Guru | | | 1. Update guru. /teacher/:id | |
| PUT  Mata Pelajaran | | | 1. Update maple. /course/:id | |
|  | | |  | |
| Route | | | index   1. classRoute 2. studentRoute 3. teachingNotesRoute 4. teacherRoute 5. mapelRoute 6. userRoute | |
|  | | |  | |
| DATABASE | | | Total: 6   1. Daftar kelas & mapel 2. Data siswa 3. Data guru 4. Data mapel 5. Data user 6. Data catatan mengajar | |
| 1 | Daftar kelas & Mapel   1. id 2. kelas 3. mapel 4. guru  |  |  |  |  | | --- | --- | --- | --- | | PK-id | kelas | FK-mata\_pelajaran | FK-Guru | | 1 | X TOI 1 | 1 | 1 | | 2 | X TOI 2 | 1 | 1 | | | | |
| 2 | Data siswa:   1. id (berisi nis siswa) 2. nama 3. jenis kelamin 4. tahun masuk 5. kelas  |  |  |  |  |  | | --- | --- | --- | --- | --- | | PK-id | nama | jenis\_kelamin | tahun\_masuk | FK-kelas | | 12345 | Siswa 1 | L |  | 1 | | 12346 | Siswa 2 | P |  | 2 | | | | |
| 3 | Data Guru:   1. id 2. nama 3. jenis kelamin  |  |  |  |  |  | | --- | --- | --- | --- | --- | | PK-id | nama | jenis\_kelamin | FK-kelas | FK-mata\_pelajaran | | 992002249 | Teacher 1 | L | 1 | 1 | | 992002250 | Teacher 2 | P | 2 | 2 | | | | |
| 4 | Data Mata Pelajaran:   1. id 2. mata\_pelajaran  |  |  | | --- | --- | | PK-id | mata\_pelajaran | | 1 | Dasar Kejuruan | | 2 | Sistem Robot Industri | | | | |
| 5 | Data User   1. id 2. nama 3. password  |  |  |  | | --- | --- | --- | | id | nama | password | | 1 | user | 12345 | | | | |
| 6 | Data catatan mengajar:   1. id 2. siswa 3. presensi (hadir/izin/sakit/alpa) 4. mata pelajaran(ski, ske) 5. materi(tergantung mapel) 6. nilai (isinya opsional) 7. catatan setiap siswa (isinya opsional) 8. guru 9. jam(jam 07:00 dsb.) 10. tanggal mengajar 11. tahun ajaran(2024/2025) 12. semester 13. jumlah\_jp 14. kelas  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | pk-id | presensi | fk-siswa | fk-mata\_pelajaran | materi | nilai | catatan | fk-guru | jam | tanggal | tahun\_ajaran | semester | jumlah\_jp | FK-kelas | | 1 | hadir | 1 | 1 | Pengenalan PLC |  |  | 1 | 07:00 | 22-juli-2024 | 2024/2025 | 1/Ganjil | 5 | 1 | | | | |
| ERD | | | |  |
|  | | | | draw.io |
| Folder project | | | | MVC |
|  | | | | perangkat\_ajar |
|  | | | |  |
| inisialisasi GIT | | | | git init |
| inisialisasi NPM | | | | npm init -y |
| install Third party | | | | express  nodemon  joi  bcrypt  dotenv  pg  swagger  eslint + prettier  knex |
|  | | | | npm i express nodemon joi bcrypt dotenv pg knex --save-dev  eslint +prettier |
| swagger | | | | npm i swagger-ui-express swagger-jsdoc |
| react | | | | npx create-react-app [app name] |
| bootstrap + reactstrap | | | | npm i bootstrap reactstrap |
| config package.json | | | |  |
|  | | | |  |
|  | | | |  |
| config knex | | | | 1. buat knexfile. npx knex init 2. buat migrasi kosong. npx knex migrate:make init --migrations-directory database/migrations |
| integrasi express dengan DB dengan knex | | | | 1. buat DB di postgres 2. siapkan environment variable .env 3. buat file migrasi (.js) untuk otomatisasi migrasi 4. buat db file untuk eksekusi query postgres 5. modifikasi package.json pada scripts untuk menjalankan migrasi 6. modifikasi model & controller untuk insert 7. jalankan migrasi. npm run migrate |
| Query  untuk buat TABLE | | CREATE TABLE kelas(  id\_kelas INT PRIMARY KEY,  nama\_kelas VARCHAR(100),  FOREIGN KEY (id\_mata\_pelajaran) REFERENCES mata\_pelajaran(id\_mata\_pelajaran)  FOREIGN KEY (id\_guru) REFERENCES guru(id\_guru)  )  CREATE TABLE guru(  id\_guru INT PRIMARY KEY,  nama\_guru VARCHAR(100),  jenis\_kelamin VARCHAR(100),  FOREIGN KEY (id\_mata\_pelajaran) REFERENCES mata\_pelajaran(id\_mata\_pelajaran)  FOREIGN KEY (id\_kelas) REFERENCES kelas(id\_kelas)  )  CREATE TABLE mata\_pelajaran(  id\_mata\_pelajaran INT PRIMARY KEY,  nama\_ mata\_pelajaran VARCHAR(100),  )  CREATE TABLE siswa(  id\_siswa INT PRIMARY KEY,  nama\_ siswa VARCHAR(100),  jenis\_kelamin VARCHAR(100),  FOREIGN KEY (id\_kelas) REFERENCES kelas(id\_kelas)  )  CREATE TABLE catatan\_mengajar(  id\_catatan\_mengajar INT PRIMARY KEY,  presensi VARCHAR(100),  materi VARCHAR(100),  catatan VARCHAR(100),  jam VARCHAR(100),  jumlah\_jp VARCHAR(100),  tanggal VARCHAR(100),  tahun\_ajaranVARCHAR(100),  semester VARCHAR(100),  nilai VARCHAR(100),  FOREIGN KEY (id\_siswa) REFERENCES siswa(id\_siswa),  FOREIGN KEY (id\_kelas) REFERENCES kelas(id\_kelas),  FOREIGN KEY (id\_mata\_pelajaran) REFERENCES mata\_pelajaran(id\_mata\_pelajaran),  FOREIGN KEY (id\_guru) REFERENCES guru(id\_guru),  )  CREATE TABLE user(  id\_user INT PRIMARY KEY,  user\_name VARCHAR(100),  password VARCHAR(100),  ) | | |
| untuk INSERT DATA | | | | INSERT INTO kelas(id\_kelas, nama\_kelas, id\_mata\_pelajaran, id\_guru) VALUES  (1,’X TOI 1’, 1, 1),  (2,’X TOI 2’, 1, 1),  (3,’XI TOI 1’, 1, 1),  (4,’XI TOI 2’, 1, 1),  (5,’XII TOI 1’, 1, 1),  (6,’XII TOI 2’, 1, 1),  INSERT INTO guru(id\_guru, nama\_guru, jenis\_kelamin, id\_mata\_pelajaran, id\_kelas) VALUES  (1,’kennedy’, ‘L’, 1, 1),  (2,’john’, ‘L’, 1, 1),  (3,’freedy’, ‘L’, 1, 1),  (4,’fring’, ‘L’, 1, 1),  INSERT INTO mata\_pelajaran(id\_mata\_pelajaran, nama\_ mata\_pelajaran) VALUES  (1,’Dasar Kejuruan 2’),  (2,’Informatika’),  (3,’Sistem Kontrol Industri’),  (4,’Sistem Kontrol Elektronik’),  (5,’Piranti Sensor & Aktuator 3’),  (6,’Gambar MEP’),  INSERT INTO siswa(id\_siswa, nama\_siswa, jenis\_kelamin, id\_kelas) VALUES  (1,’john’, ‘L’, 1),  (2,’john’, ‘L’, 1),  (3,’john’, ‘L’, 1),  (4,’john’, ‘L’, 1),  (5,’john’, ‘L’, 1),  (1,’john’, ‘L’, 2),  (2,’john’, ‘L’, 2),  (3,’john’, ‘L’, 2),  (4,’john’, ‘L’, 2),  (5,’john’, ‘L’, 2),  (1,’john’, ‘L’, 3),  (2,’john’, ‘L’, 3),  (3,’john’, ‘L’, 3),  (4,’john’, ‘L’, 3),  (5,’john’, ‘L’, 3),  (1,’john’, ‘L’, 4),  (2,’john’, ‘L’, 4),  (3,’john’, ‘L’, 4),  (4,’john’, ‘L’, 4),  (5,’john’, ‘L’, 4),  (1,’john’, ‘L’, 5),  (2,’john’, ‘L’, 5),  (3,’john’, ‘L’, 5),  (4,’john’, ‘L’, 5),  (5,’john’, ‘L’, 5),  (1,’john’, ‘L’, 6),  (2,’john’, ‘L’, 6),  (3,’john’, ‘L’, 6),  (4,’john’, ‘L’, 6),  (5,’john’, ‘L’, 6),  INSERT INTO catatan\_mengajar (id\_catatan\_mengajar,presensi,materi,catatan,jam,jumlah\_jp,tanggal,tahun\_ajaran,semester,nilai,id\_siswa,id\_kelas,id\_mata\_pelajaran,id\_guru,) VALUES  (1,'HADIR','Pengenalan Komponen Pasif','','07:00','5','22-Juli-2024','2024/2025','1','',1,1,1,1),  (2,'HADIR','Pengenalan Komponen Pasif','','07:00','5','22-Juli-2024','2024/2025','1','',2,1,1,1),  (3,'HADIR','Pengenalan Komponen Pasif','','07:00','5','22-Juli-2024','2024/2025','1','',3,1,1,1),  (4,'HADIR','Pengenalan Komponen Pasif','','07:00','5','22-Juli-2024','2024/2025','1','',4,1,1,1),  (5,'HADIR','Pengenalan Komponen Pasif','','07:00','5','22-Juli-2024','2024/2025','1','',5,1,1,1),  (6,'HADIR','Pengenalan Algoritma','','12:15','5','22-Juli-2024','2024/2025','1','',1,2,2,1),  (7,'HADIR','Pengenalan Algoritma','','12:15','5','22-Juli-2024','2024/2025','1','',2,2,2,1),  (8,'HADIR','Pengenalan Algoritma','','12:15','5','22-Juli-2024','2024/2025','1','',3,2,2,1),  (9,'HADIR','Pengenalan Algoritma','','12:15','5','22-Juli-2024','2024/2025','1','',4,2,2,1),  (10,'HADIR','Pengenalan Algoritma','','12:15','5','22-Juli-2024','2024/2025','1','',5,2,2,1),  (11,'HADIR','Pengenalan PLC','','07:00','5','23-Juli-2024','2024/2025','1','',1,3,3,1),  (12,'HADIR','Pengenalan PLC','','07:00','5','23-Juli-2024','2024/2025','1','',2,3,3,1),  (13,'HADIR','Pengenalan PLC','','07:00','5','23-Juli-2024','2024/2025','1','',3,3,3,1),  (14,'HADIR','Pengenalan PLC','','07:00','5','23-Juli-2024','2024/2025','1','',4,3,3,1),  (15,'HADIR','Pengenalan PLC','','07:00','5','23-Juli-2024','2024/2025','1','',5,3,3,1),  (16,'HADIR','Pengenalan Magnetic Contactor','','12:15','5','23-Juli-2024','2024/2025','1','',1,4,4,1),  (17,'HADIR','Pengenalan Magnetic Contactor','','12:15','5','23-Juli-2024','2024/2025','1','',2,4,4,1),  (18,'HADIR','Pengenalan Magnetic Contactor','','12:15','5','23-Juli-2024','2024/2025','1','',3,4,4,1),  (19,'HADIR','Pengenalan Magnetic Contactor','','12:15','5','23-Juli-2024','2024/2025','1','',4,4,4,1),  (20,'HADIR','Pengenalan Magnetic Contactor','','12:15','5','23-Juli-2024','2024/2025','1','',5,4,4,1),  (21,'HADIR','Pengenalan Sensor','','07:00','5','24-Juli-2024','2024/2025','1','',1,5,5,1),  (22,'HADIR','Pengenalan Sensor','','07:00','5','24-Juli-2024','2024/2025','1','',2,5,5,1),  (23,'HADIR','Pengenalan Sensor','','07:00','5','24-Juli-2024','2024/2025','1','',3,5,5,1),  (24,'HADIR','Pengenalan Sensor','','07:00','5','24-Juli-2024','2024/2025','1','',4,5,5,1),  (25,'HADIR','Pengenalan Sensor','','07:00','5','24-Juli-2024','2024/2025','1','',5,5,5,1),  (26,'HADIR','Pengenalan MEP','','12:15','5','24-Juli-2024','2024/2025','1','',1,6,6,1),  (27,'HADIR','Pengenalan MEP','','12:15','5','24-Juli-2024','2024/2025','1','',2,6,6,1),  (28,'HADIR','Pengenalan MEP','','12:15','5','24-Juli-2024','2024/2025','1','',3,6,6,1),  (29,'HADIR','Pengenalan MEP','','12:15','5','24-Juli-2024','2024/2025','1','',4,6,6,1),  (30,'HADIR','Pengenalan MEP','','12:15','5','24-Juli-2024','2024/2025','1','',5,6,6,1),  INSERT INTO user(id\_user, user\_name, password) VALUES  (1,’john’,’12345’), |
|  | | | |  |
| Tampilkan Catatan Mengajar | | | | SELECT  catatan\_mengajar.id\_catatan\_mengajar,  siswa.nama\_siswa,  kelas.nama\_kelas,  mata\_pelajaran.nama\_mata\_pelajaran,  catatan\_mengajar.materi,  catatan\_mengajar.presensi,  catatan\_mengajar.tanggal,  catatan\_mengajar.jam,  catatan\_mengajar.jumlah\_jp,  guru.nama\_guru,  catatan\_mengajar.tahun\_ajaran,  catatan\_mengajar.semester,  FROM  catatan\_mengajar  JOIN  siswa ON catatan\_mengajar.id\_siswa = siswa.id\_siswa  JOIN  kelas ON catatan\_mengajar.id\_kelas = kelas.id\_kelas  JOIN  mata\_pelajaran ON catatan\_mengajar.id\_mata\_pelajaran = mata\_pelajaran.id\_mata\_pelajaran  JOIN  guru ON catatan\_mengajar.id\_guru = guru.id\_guru |
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