CREATE DATABASE do\_an\_nhom\_6 CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci;

Use do\_an\_nhom\_6;

CREATE TABLE thuoctinhchung (

id\_thuoctinh INT AUTO\_INCREMENT PRIMARY KEY,

ten\_thuoctinh VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

gia\_tri TEXT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

mo\_ta TEXT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE vaitro (

id\_vaitro INT AUTO\_INCREMENT PRIMARY KEY,

ten\_vaitro VARCHAR(100) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

mo\_ta\_vaitro TEXT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE nguoidung (

id\_nguoidung INT AUTO\_INCREMENT PRIMARY KEY,

ten\_dang\_nhap VARCHAR(100) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

mat\_khau VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

email VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

so\_dien\_thoai VARCHAR(15) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

trang\_thai ENUM('hoạt động', 'không hoạt động') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci DEFAULT 'hoạt động'

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE phanquyen (

id\_phanquyen INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

id\_vaitro INT NOT NULL,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE,

FOREIGN KEY (id\_vaitro) REFERENCES vaitro(id\_vaitro) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE file\_nguoidung (

id\_file INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_file VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

loai\_file VARCHAR(50) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

duong\_dan VARCHAR(500) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

ngay\_upload DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE khoa (

id\_khoa INT AUTO\_INCREMENT PRIMARY KEY,

ten\_khoa VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE chuyennganh (

id\_chuyennganh INT AUTO\_INCREMENT PRIMARY KEY,

ten\_chuyennganh VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

ma\_khoa INT NOT NULL,

REFERENCES khoa(id\_khoa) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE sinhvien (

id\_sinhvien INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_sinhvien VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

lop VARCHAR(100) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

ma\_chuyen\_nganh INT,

nam\_vao\_hoc INT NOT NULL,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE,

FOREIGN KEY (ma\_chuyen\_nganh) REFERENCES chuyennganh(id\_chuyennganh) ON DELETE SET NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE giaovien (

id\_giaovien INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_giaovien VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

email VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

so\_dien\_thoai VARCHAR(15) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE hieutruong (

id\_hieutruong INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_hieutruong VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE ketoan (

id\_ketoan INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_ketoan VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE admin (

id\_admin INT AUTO\_INCREMENT PRIMARY KEY,

id\_nguoidung INT NOT NULL,

ten\_admin VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

FOREIGN KEY (id\_nguoidung) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE phonghoc (

id\_phonghoc INT AUTO\_INCREMENT PRIMARY KEY,

ten\_phonghoc VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

so\_cho\_ngoi INT NOT NULL,

co\_may\_chieu BOOLEAN DEFAULT FALSE,

khu\_vuc VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE monhoc (

id\_monhoc INT AUTO\_INCREMENT PRIMARY KEY,

ten\_monhoc VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

so\_tin\_chi INT NOT NULL,

ma\_chuyen\_nganh INT,

FOREIGN KEY (ma\_chuyen\_nganh) REFERENCES chuyennganh(id\_chuyennganh) ON DELETE SET NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE chitietchuyennganh (

id\_chitiet INT AUTO\_INCREMENT PRIMARY KEY,

ma\_chuyennganh INT NOT NULL,

ma\_monhoc INT NOT NULL,

FOREIGN KEY (ma\_chuyennganh) REFERENCES chuyennganh(id\_chuyennganh) ON DELETE CASCADE,

FOREIGN KEY (ma\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE chitietmonhoc (

id\_chitietmonhoc INT AUTO\_INCREMENT PRIMARY KEY,

ma\_monhoc INT NOT NULL,

mo\_ta TEXT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

so\_tiet INT NOT NULL,

FOREIGN KEY (ma\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE lop (

id\_lop INT AUTO\_INCREMENT PRIMARY KEY,

ten\_lop VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

ma\_phong\_hoc INT,

FOREIGN KEY (ma\_phong\_hoc) REFERENCES phonghoc(id\_phonghoc) ON DELETE SET NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE noidungmonhoc (

id\_noidung INT AUTO\_INCREMENT PRIMARY KEY,

id\_monhoc INT NOT NULL,

ten\_tai\_lieu VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

loai\_tai\_lieu VARCHAR(50) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

duong\_dan VARCHAR(500) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

nguoi\_upload INT NOT NULL,

ngay\_upload DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (id\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE CASCADE,

FOREIGN KEY (nguoi\_upload) REFERENCES nguoidung(id\_nguoidung) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE thoikhoabieu (

id\_thoikhoabieu INT AUTO\_INCREMENT PRIMARY KEY,

id\_monhoc INT NOT NULL,

id\_giaovien INT NOT NULL,

id\_lop INT NOT NULL,

id\_phonghoc INT NOT NULL,

ngay\_hoc DATE NOT NULL,

gio\_bat\_dau TIME NOT NULL,

gio\_ket\_thuc TIME NOT NULL,

FOREIGN KEY (id\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE CASCADE,

FOREIGN KEY (id\_giaovien) REFERENCES giaovien(id\_giaovien) ON DELETE CASCADE,

FOREIGN KEY (id\_lop) REFERENCES lop(id\_lop) ON DELETE CASCADE,

FOREIGN KEY (id\_phonghoc) REFERENCES phonghoc(id\_phonghoc) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE dangkyhoc (

id\_dangky INT AUTO\_INCREMENT PRIMARY KEY,

id\_sinhvien INT NOT NULL,

id\_thoikhoabieu INT NOT NULL,

FOREIGN KEY (id\_sinhvien) REFERENCES sinhvien(id\_sinhvien) ON DELETE CASCADE,

FOREIGN KEY (id\_thoikhoabieu) REFERENCES thoikhoabieu(id\_thoikhoabieu) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE diemdanh (

id\_diemdanh INT AUTO\_INCREMENT PRIMARY KEY,

id\_sinhvien INT NOT NULL,

id\_thoikhoabieu INT NOT NULL,

trang\_thai ENUM('Có mặt', 'Vắng mặt', 'Muộn') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci DEFAULT 'Vắng mặt',

FOREIGN KEY (id\_sinhvien) REFERENCES sinhvien(id\_sinhvien) ON DELETE CASCADE,

FOREIGN KEY (id\_thoikhoabieu) REFERENCES thoikhoabieu(id\_thoikhoabieu) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE diem (

id\_diem INT AUTO\_INCREMENT PRIMARY KEY,

id\_sinhvien INT NOT NULL,

id\_monhoc INT NOT NULL,

loai\_diem ENUM('Giữa kỳ', 'Cuối kỳ', 'Thực hành', 'Khác') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

diem\_so DECIMAL(5, 2) CHECK (diem\_so >= 0 AND diem\_so <= 10),

FOREIGN KEY (id\_sinhvien) REFERENCES sinhvien(id\_sinhvien) ON DELETE CASCADE,

FOREIGN KEY (id\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE hocphi (

id\_hocphi INT AUTO\_INCREMENT PRIMARY KEY,

id\_sinhvien INT NOT NULL,

so\_tien DECIMAL(10, 2) NOT NULL,

trang\_thai ENUM('Chưa thanh toán', 'Đang xử lý', 'Đã thanh toán') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci DEFAULT 'Chưa thanh toán',

FOREIGN KEY (id\_sinhvien) REFERENCES sinhvien(id\_sinhvien) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE chitiethocphi (

id\_chitiethocphi INT AUTO\_INCREMENT PRIMARY KEY,

id\_hocphi INT NOT NULL,

id\_monhoc INT,

ten\_khoan\_phi VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

so\_tien DECIMAL(10, 2) NOT NULL,

mien\_giam DECIMAL(10, 2) DEFAULT 0,

FOREIGN KEY (id\_hocphi) REFERENCES hocphi(id\_hocphi) ON DELETE CASCADE,

FOREIGN KEY (id\_monhoc) REFERENCES monhoc(id\_monhoc) ON DELETE SET NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE thanhtoan (

id\_thanhtoan INT AUTO\_INCREMENT PRIMARY KEY,

id\_hocphi INT NOT NULL,

so\_tien\_da\_tra DECIMAL(10, 2) NOT NULL,

phuong\_thuc ENUM('Tiền mặt', 'Chuyển khoản', 'Thẻ tín dụng') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

ngay\_thanhtoan DATETIME DEFAULT CURRENT\_TIMESTAMP,

trang\_thai ENUM('Thành công', 'Chờ xử lý', 'Thất bại') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci DEFAULT 'Chờ xử lý',

FOREIGN KEY (id\_hocphi) REFERENCES hocphi(id\_hocphi) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE thanhtich (

id\_thanhtich INT AUTO\_INCREMENT PRIMARY KEY,

id\_sinhvien INT NOT NULL,

ten\_thanhtich VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci NOT NULL,

mo\_ta TEXT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci,

ngay\_dat\_duoc DATE NOT NULL,

loai\_thanhtich ENUM('Cá nhân', 'Nhóm') CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci DEFAULT 'Cá nhân',

FOREIGN KEY (id\_sinhvien) REFERENCES sinhvien(id\_sinhvien) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;