/\*1\*/

Create View cau1 AS

SELECT HoSV, TenSV, MaKH, NoiSinh, HocBong FROM SinhVien

WHERE HocBong > 100000 AND NoiSinh = 'Tp. HCM';

/\*2\*/

Create View cau2 AS

SELECT MaSV, MaKH, Phai FROM SinhVien

WHERE MaKH = 'AV' OR MaKH = 'TR';

/\*3\*/

Create View cau3 AS

SELECT MaSV, NgaySinh, NoiSinh, HocBong FROM SinhVien

WHERE NgaySinh BETWEEN '1986-01-01' AND '1992-06-05';

/\*4\*/

Create View cau4 AS

SELECT MaSV, NgaySinh, Phai, MaKH FROM SinhVien

WHERE HocBong BETWEEN 200000 AND 800000;

/\*5\*/

Create View cau5 AS

SELECT MaMH, TenMH, SoTiet FROM MonHoc

WHERE SoTiet > 40 AND SoTiet < 60;

/\*6\*/

Create View cau6 AS

SELECT MaSV, TenSV, Phai FROM SinhVien

WHERE Phai = 'False' AND MaKH = 'AV';

/\*7\*/

Create View cau7 AS

SELECT HoSV, TenSV, NoiSinh, NgaySinh FROM SinhVien

WHERE NoiSinh = N'Hà Nội' AND NgaySinh > '1990-01-01';

/\*8\*/

Create View cau8 AS

SELECT MaSV, TenSV FROM SinhVien

WHERE Phai = 'True' AND TenSV LIKE '%N%';

/\*9\*/

Create View cau9 AS

SELECT MaSV, HoSV, TenSV, NgaySinh, NoiSinh FROM SinhVien

WHERE Phai = 'False' AND MaKH = 'TH' AND NgaySinh > '1986-05-30';

/\*10\*/

Create View cau10 AS

SELECT

HoSV AS 'Họ và tên sinh viên',

CASE

WHEN Phai = 'False' THEN N'Nam'

WHEN Phai = 'True' THEN N'Nữ'

ELSE 'Không xác định'

END AS 'Giới tính',

NgaySinh AS 'Ngày sinh'

FROM SinhVien;

/\*11\*/

Create View cau11 AS

SELECT MaSV,

(YEAR(GETDATE()) - YEAR(NgaySinh)) AS Tuoi,

NoiSinh,

MaKH

FROM SinhVien;

/\*12\*/

Create View cau12 AS

SELECT

HoSV AS 'Họ sinh viên',

TenSV AS 'Tên sinh viên',

(YEAR(GETDATE()) - YEAR(NgaySinh)) AS 'Tuổi',

TenKH AS 'Tên khoa'

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

WHERE (YEAR(GETDATE()) - YEAR(NgaySinh)) BETWEEN 20 AND 30;

/\*13\*/

Create View cau13 AS

SELECT MaSV,

Phai,

MaKH,

CASE

WHEN HocBong > 500000 THEN N'Học bổng cao'

ELSE N'Mức trung bình'

END AS N'Mức học bổng'

FROM SinhVien;

/\*14\*/

Create View cau14 AS

SELECT

HoSV AS 'Họ sinh viên',

TenSV AS 'Tên sinh viên',

CASE

WHEN Phai = 'False' THEN N'Nam'

WHEN Phai = 'True' THEN N'Nữ'

ELSE 'Không xác định'

END AS 'Giới tính',

N'Anh văn' AS 'Tên khoa'

FROM SinhVien

WHERE MaKH = 'AV';

/\*15\*/

Create View cau15 AS

SELECT Khoa.TenKH AS N'Tên khoa',

SinhVien.HoSV AS N'Họ tên sinh viên',

SinhVien.TenSV AS N'Tên sinh viên',

MonHoc.TenMH AS N'Tên môn học',

MonHoc.SoTiet AS N'Số tiết',

Ketqua.Diem AS N'Điểm'

FROM Ketqua

JOIN SinhVien ON Ketqua.MaSV = SinhVien.MaSV

JOIN MonHoc ON Ketqua.MaMH = MonHoc.MaMH

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

WHERE Khoa.TenKH = N'Tin học';

/\*16\*/

Create View cau16 AS

SELECT SinhVien.HoSV AS N'Họ sinh viên',

SinhVien.TenSV AS N'Tên sinh viên',

Khoa.MaKH,

MonHoc.TenMH AS N'Tên môn học',

Ketqua.Diem AS N'Điểm thi',

CASE

WHEN Ketqua.Diem > 8 THEN N'Giỏi'

WHEN Ketqua.Diem BETWEEN 6 AND 8 THEN N'Khá'

ELSE N'Trung Bình'

END AS N'Loại'

FROM Ketqua

JOIN SinhVien ON Ketqua.MaSV = SinhVien.MaSV

JOIN MonHoc ON Ketqua.MaMH = MonHoc.MaMH

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH;

/\*17\*/

Create View cau17 AS

WITH MaxHocBong AS (

SELECT Khoa.MaKH, Khoa.TenKH, MAX(SinhVien.HocBong) AS MaxHocBong

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

GROUP BY Khoa.MaKH, Khoa.TenKH

)

SELECT MaxHocBong.MaKH, MaxHocBong.TenKH, MaxHocBong.MaxHocBong AS 'Học bổng cao nhất'

FROM MaxHocBong;

/\*18\*/

Create View cau18 AS

SELECT MonHoc.MaMH AS 'Mã môn',

MonHoc.TenMH AS 'Tên môn',

COUNT(DISTINCT Ketqua.MaSV) AS 'Số sinh viên đang học'

FROM MonHoc

LEFT JOIN Ketqua ON MonHoc.MaMH = Ketqua.MaMH

GROUP BY MonHoc.MaMH, MonHoc.TenMH;

/\*19\*/

Create View cau19 AS

WITH MaxDiem AS (

SELECT MonHoc.TenMH AS N'Tên môn',

MonHoc.SoTiet AS N'Số tiết',

SinhVien.TenSV AS N'Tên sinh viên',

Ketqua.Diem AS N'Điểm'

FROM Ketqua

JOIN MonHoc ON Ketqua.MaMH = MonHoc.MaMH

JOIN SinhVien ON Ketqua.MaSV = SinhVien.MaSV

WHERE Ketqua.Diem = (SELECT MAX(Diem) FROM Ketqua)

)

SELECT \*

FROM MaxDiem;

/\*20\*/

Create View cau20 AS

WITH CountSinhVien AS (

SELECT Khoa.MaKH AS N'Mã khoa',

Khoa.TenKH AS N'Số tiết',

Count(Sinhvien.MaSV) AS N'Tổng số sinh viên'

FROM Khoa

LEFT JOIN SinhVien ON Khoa.MaKH = SinhVien.MaKH

GROUP BY Khoa.MaKH, Khoa.TenKH

)

SELECT \*

FROM CountSinhVien

WHERE 'Tổng số sinh viên' = (SELECT MAX('Tổng số sinh viên') FROM CountSinhVien);

/\*21\*/

Create View cau21 AS

WITH MaxHocBongByKhoa AS (

SELECT Khoa.MaKH AS 'Mã khoa',

Khoa.TenKH AS 'Tên khoa',

SinhVien.HoSV AS 'Họ sinh viên',

SinhVien.TenSV AS 'Tên sinh viên',

SinhVien.HocBong AS 'Học bổng',

ROW\_NUMBER() OVER (PARTITION BY Khoa.MaKH ORDER BY SinhVien.HocBong DESC) AS RowNum

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

)

SELECT \*

FROM MaxHocBongByKhoa

WHERE RowNum = 1;

/\*22\*/

Create View cau22 AS

WITH MaxHocBongByKhoa AS (

SELECT SinhVien.MaSV AS N'Mã sinh viên',

SinhVien.HoSV AS N'Họ sinh viên',

SinhVien.TenSV AS N'Tên sinh viên',

SinhVien.HocBong AS N'Học bổng',

Khoa.TenKH AS N'Tên khoa',

ROW\_NUMBER() OVER (PARTITION BY Khoa.MaKH ORDER BY SinhVien.HocBong DESC) AS RowNum

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

WHERE Khoa.TenKH = N'Tin học'

)

SELECT \*

FROM MaxHocBongByKhoa

WHERE RowNum = 1;

/\*23\*/

Create View cau23 AS

SELECT SinhVien.HoSV AS N'Họ sinh viên',

MonHoc.TenMH AS N'Tên môn',

Ketqua.Diem AS N'Điểm'

FROM Ketqua

JOIN SinhVien ON Ketqua.MaSV = SinhVien.MaSV

JOIN MonHoc ON Ketqua.MaMH = MonHoc.MaMH

WHERE MonHoc.TenMH = N'Cơ sở dữ liệu'

AND Ketqua.Diem = (SELECT MAX(Diem) FROM Ketqua WHERE MaMH = MonHoc.MaMH);

/\*24\*/

Create View cau24 AS

WITH MinDiemDoHoa AS (

SELECT SinhVien.HoSV AS N'Họ tên sinh viên',

SinhVien.TenSV AS N'Tên sinh viên',

Khoa.TenKH AS N'Tên khoa',

MonHoc.TenMH AS N'Tên môn',

Ketqua.Diem AS N'Điểm'

FROM Ketqua

JOIN SinhVien ON Ketqua.MaSV = SinhVien.MaSV

JOIN MonHoc ON Ketqua.MaMH = MonHoc.MaMH

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

WHERE MonHoc.TenMH = N'Đồ họa ứng dụng'

)

SELECT TOP 3 \*

FROM MinDiemDoHoa

ORDER BY Điểm;

/\*25\*/

Create View cau25 AS

WITH KhoaSinhVienNu AS (

SELECT Khoa.MaKH AS 'Mã khoa',

Khoa.TenKH AS 'Tên khoa',

COUNT(\*) AS 'Số sinh viên nữ'

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

WHERE SinhVien.Phai = 'True'

GROUP BY Khoa.MaKH, Khoa.TenKH

)

SELECT TOP 1 'Mã khoa', 'Tên khoa'

FROM KhoaSinhVienNu

ORDER BY 'Số sinh viên nữ' DESC;

/\*26\*/

Create View cau25 AS

WITH ThongKeSinhVienTheoKhoa AS (

SELECT Khoa.MaKH AS 'Mã khoa',

Khoa.TenKH AS 'Tên khoa',

COUNT(\*) AS 'Tổng số sinh viên',

SUM(CASE WHEN SinhVien.Phai = N'True' THEN 1 ELSE 0 END) AS 'Tổng số sinh viên nữ'

FROM SinhVien

JOIN Khoa ON SinhVien.MaKH = Khoa.MaKH

GROUP BY Khoa.MaKH, Khoa.TenKH

)

SELECT 'Mã khoa', 'Tên khoa', 'Tổng số sinh viên', 'Tổng số sinh viên nữ'

FROM ThongKeSinhVienTheoKhoa;