What is the result of deducting liabilities from assets?
equity

What are considered the knowledge and technical know-how of a certain position of the company?
Requirement

What is the interconnection of companies and their resources that link the supplier to the customer?
supply chain management

What is the SCM process involved with converting raw materials into products?
production

What are specifically the individual capabilities of an employee?
qualification

What financial statement lets us know how much of the company is worth in total?
statement of financial position

What are products performed called?
services

A friend of yours has purchased goods from you on credit. What SAP submodule would handle this transaction?
accounts receivable

What process attempts the prediction of the outflow and inflow of products?
forecasting

What is remuneration based on a month's effort of the employee?
salary

What program is responsible for computing the inventory and supplies of the organization and its proper management?
Inventory

What financial statement shows us the current expenses that the company has made so far?
profit and loss statement

What specific process refers to the managing sales orders, supply and distribution hubs, and the transportation of these orders?
order fulfillment

What refers to the collective technical resources and health of the employees in an organization?
human capital

What is the SCM process involved with getting raw materials?
procurement process

A friend of yours has purchased goods from you on credit. What SAP submodule would handle this transaction?
accounts receivable

What is accomplishing what is intended or wanted?
fulfillment

What specific process refers to the managing sales orders, supply and distribution hubs, and the transportation of these orders?
Fulfillment

It is a process of payroll processing that allows the computation of each employee's pay and notes the errors in an error log. What may this feature of the HR module of SAP be?
payroll processing

What concept is where we create the strategy of replacing vital employees in an organization?
succession planning

These amounts refer mostly to the pay rate and bonuses and are part of the computation of the paycheck. What are these?
remuneration elements

What financial statement shows how easy the company can use its liquid assets to pay off commitments and expenses?
cash flow statement

What program is responsible for computing the amount of raw materials to be bought at a certain date?
Mrp

What involves the reporting, along with processes before this, the monetary and non-monetary information of businesses?
Accounting

What are composed of vehicles for the movement of goods?
Transportation

What principle describes that if an account is increases or otherwise, they must be recognized and reported?
Accrual

What composes of plants or factories; and warehouses or hubs?
Facilities

What is the creation of products specifically for the distributors?
manufacturing flow management

These amounts refer mostly to taxes and contributions and are part of the computation of the paycheck. What are these?
statutory and voluntary deductions

A friend of yours has let you purchase goods on credit. What SAP submodule would handle this transaction?
accounts payable

What are products manufactured called?
Goods

What is the where certain processes of the business are instead given to another company?
outsourcing and partnership

What concept refers to all sorts of things, with the exception of people, that has value to an economic organization?
Assets

What refers to the collective technical resources and health of the employees in an organization?
human capital

You are a bookkeeper. Your company bought a new computer for you to use and paid for it on credit from the bank. What are the accounts affected and where would their numerical values be placed?
equipment and accounts payable, debit and credit

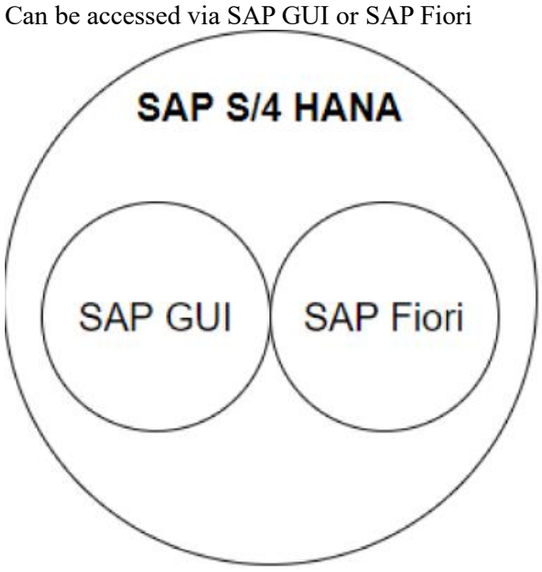
You are a bookkeeper. Your company gave a loan to another company. What are the accounts affected and where would their numerical values be placed when you made a mistake and recorded the transaction twice in the journal?
accounts receivable and cash, credit and debit

You are a bookkeeper. Your company sold a new computer and the customer paid for it on credit from their bank. What are the accounts affected and where would their numerical values be placed when you made a mistake and recorded the transaction twice in the journal?
inventory and accounts receivable, debit and credit

You are a bookkeeper. Your company gave a loan to another company. What possible accounts are affected and where would their numerical values be placed?
accounts receivable and cash, debit and credit

I. SAP CONFIGURATION

SAP S/4 HANA
Is SAP's current enterprise application suite
First released in 2015
successor to the R/3
Can be accessed via SAP GUI or SAP Fiori



SAP GUI
universal client for accessing SAP functions
uses transaction codes for quick access

SAP Fiori
is a design system that enables you to create business apps with a consumer grade user experience
has search bars, dropdown menus to access apps

Requirements for Connection
GUI: sap router string, application server, instance number, system id, client
Fiori: https://<application server>.ucc.ovgu.de/sap/bc/ui2/flp

On-premise
traditional in-house IT infrastructure models

Cloud
SAP S/4HANA Cloud:
placing a customer's instance of the solution on a partitioned cloud server alongside other customers

Private Cloud:
placing a customer's instance of the solution on a partitioned cloud server alongside other customers

RISE with SAP license:
access to either an SAP S/4HANA Cloud or SAP S/4HANA hosted on a private cloud

Hybrid
provides a combination of both on premise and cloud deployments

Transactional Apps
used to perform transactional tasks or entire business processes

Analytical Apps
provide role-based real time information about business operations

Fact Sheet Apps
provide key information and detailed facts of any business operation

II. PROCUREMENT PROCESS

Procure
To get, acquire

Procurement
is the business-to-business purchase and sale of supplies and services
Companies usually develop strategic plans with suppliers to support the manufacturing flow management process and development of new products

Supply Chain Management (SCM)
Is the network of services, material, and information flow that link a firm's customer relations, order fulfillment, and supplier relations processes to those of its suppliers and customers
The web of people and organizations that connect goods and services together

Procurement Process
1. Choosing the goods and services required
2. Fill out a purchase request and request quotes from various suppliers
3. Work out a price and contract with the vendor, and complete the purchase order.
4. Receive the shipment and submit payment

Outsourcing and Partnership
Is an arrangement in which one company provides services for another company that could else be done or have usually been provided in-house
Benefit is that the company will increasingly focus on those activities in the value chain where it has distinctive advantage, and let everything else be outsourced.

Financial Accounting (FI)
deals in managing financial transactions within enterprises

Logistic Execution (LE)
deals with the complete supply chain process comprising vendors, warehouse, production and distribution of products, and the customers

Supplier Relationship Management (SRM)
analyzing the supply of goods and materials by vendors to determine each supplier's contribution toward success and develop strategies

SAP Production Planning (PP)
consists of master data, system configuration, and transactions in order to accomplish the plan procedure for production

SAP Materials Management (MM)
manages materials required, processed, and produced in enterprises
where purchasing occurs

Finance and Controlling (FICO)
used for external and internal financial reporting, intending to record all financial transactions posted by an organization
General ledger accounting: concerned with managing all the general ledger accounts used for reporting
Accounts receivables: concerned with managing customer accounts and capturing all transactions with the customers
Accounts payables: manages vendor accounts and captures all transactions with vendors

III. PRODUCTION AND FULFILLMENT

Production
the action of making or manufacturing from components or raw materials
the process of creating new products

Fulfillment
the achievement of something desired, promised, or predicted

Procurement
the business-to-business purchase and sale of supplies and services

Outsourcing and Partnerships
is an arrangement in which one company provides services for another company

Manufacturing Flow Management
process is to produce and supply products to the distribution channels based on past forecasts or point of sales (POS) data must be flexible to respond to market changes, and they must accommodate mass customization
MRP: material requirements planning
MRP: a computerized program both to calculate the quantity of materials needed for production and to determine when they should be ordered or made
MRP II: manufacturing resource planning

Order Fulfillment
responds to customer demand by merging several important functions: order management, storage, and delivery of finished goods

Customer Service Management Process
provides the source of customer information
provides the customer with real- time information on promising dates and product availability

Forecasting
seeks to predict levels of weekly or monthly product activity over time

Facilities
are the places in the supply chain network where product is manufactured, stored, or transshipped
The two major types of facilities are production sites (plants) and storage sites (warehouses)

Inventory
is the raw materials, work in process, and finished goods that belong to the company

Transportation
moves the product between different stages in a supply chain

Information
consists of data and analysis concerning facilities, inventory, transportation, and customers throughout the supply chain

IV. ACCOUNTING

Accounting
is the measurement, processing, and communication of financial and non- financial information about economic entities such as businesses and corporations
is the measuring of organizations using money

Assets
anything that has current or future economic value to a business

Liability
any kind of financial obligation that a business has to pay at the end of an accounting period to a person or a business

Equity
is equal to total assets minus its total liabilities

Balance Sheet
an overview of a company's assets, liabilities, and shareholders' equity as a snapshot in time

Income Statement
covers a range of time
provides an overview of revenues, expenses, net income, and earnings per share

Cash Flow Statement
measures how well a company generates cash to pay its debt obligations, fund its operating expenses, and fund investments

Concepts in Accountancy
are a number of conceptual issues that must be understood in order to develop a firm foundation of how accounting works

Accrual
Revenue is recognized when earned, and expenses are recognized when assets are consumed

Conservatism
Revenue is only recognized when there is a reasonable certainty that it will be realized, whereas expenses are recognized sooner, when there is a reasonable possibility that they will be incurred

Consistency

Once a business chooses to use a specific accounting method, it should continue using it on a go-forward basis

Economic Entity
The transactions of a business are to be kept separate from those of its owners

Going Concern
Financial statements are prepared on the assumption that the business will remain in operation in future periods

Matching
This is the concept that, when you record revenue, you should record all related expenses at the same time

Materiality
Transactions should be recorded when not doing so might alter the decisions made by a reader of a company's financial statements

Corporate Accounting
involves the use, handling, and filing of a company's financial data often for the purpose of external reporting and tax compliance

Public Accounting
is to help ensure their financial statements, records, and filings are accurate

Government Accounting
work within the context of local, state, or federal government entities

Forensic Accounting
refers to a branch of accounting that collects, recovers, and reconstructs financial data when it is difficult or impossible to obtain

Sales and Distribution (SD)
records a sale and then creates an accounts receivable entry

Materials Management (MM)
controls purchasing and records inventory changes
The receipt of goods from a purchase order creates an accounts payable entry

Financial Accounting (Fl)
manages the accounts receivable and accounts payable items created in the SD and MM modules

Controlling (CO)
tracks the costs associated with producing products

Human Resources (HR)
manages the recruiting, hiring, compensation, termination, and severance of employees

Asset Management (AM)
manages fixed-asset purchases (plant and machinery) and the related depreciation

V. HUMAN RESOURCES

Human Resources
responsible for the activities to attract, hire, reward, train, and, occasionally, terminate employees
a company's employees are its most valuable resource

Human Capital
consists of the knowledge, skills, and health that people invest in and accumulate throughout their lives, enabling them to realize their potential as productive members of society

Human Capital Management (HCM)
describe the tasks associated with managing a company's workforce

Recruiting Process
describes the position, lists the qualifications a candidate must have, specifies the type of position (temporary, part-time, full-time, or internship), and states when the position will become available

Interviewing and Hiring Process
develops a short list of candidates

Interviewing and Hiring Process

1. If a candidate accepts the interview offer, the Human Resources Department makes the arrangements for the job candidate, including travel arrangements and a schedule of interview activities
2. The supervisor of the department in which the position exists also interviews the candidate, and other employees in the department are usually given time to talk to the candidate as well
3. After the initial interview process, a Human Resources' staff member updates the candidate's file to indicate whether he or she is still a possibility for hire
4. Once someone in Human Resources Nas interviewed all the candidates on the short list, a representative of the Human Resources Department and the Supervisor of the requesting department rank the candidates on the short list
5. Once the candidate formally accepts the written offer, their file is again updated, showing that the candidate has accepted the offer
6. The Human Resources person then schedules a background check and drug test for the candidate, determines the employee's start date and makes plans for the new employee's orientation session
7. If no acceptable candidates were found, or if none of them accepts the job offer, then the process must be repeated, which at a minimum will require the development of a new short list but may involve starting over with a new job posting

Human Resources Duties After Hiring

1. The human resources department must maintain an ongoing line of communication with the employee and
2. his or her supervisor to make Sure the employee is performing well
3. Employee turnover can be a significant problem for a company
4. Another cost that is difficult to quantify is an employee's experience and job
5. Knowledge, which is lost when he or she leaves a company
6. Employee turnover is strongly tied to job satisfaction and compensation

HR with SAP ERP
A good information system allows human resources staff members to retrieve relevant employee information in a matter of seconds and to maintain proper controls so sensitive information is not compromised and privacy rules are not violated

Human Resources (HR) module

Provides tools for managing an organization's roles and responsibilities, definitions, personal employee information, and tasks related to time management, payroll, travel management, and employee training provides an Organization and Staffing Plan tool that is used to define a company’s management structure and the positions within the organizational structure as a whole

Person
unique individual who holds a position and who performs tasks

Tasks
are assigned responsibilities related to a specific job or position

Job
general classification of tasks that are routinely performed together

Position
an individual employee assignment within the organization
Tasks can be assigned directly to a position, or they can be assigned to the position by assigning a job to that position

Time Management
Hourly employees, who are paid for each Nour worked, must record the hours they work so they can be paid
Salaried employees are not paid based on the number of hours worked, but typically their time must still be tracked

Payroll Processing
Employees are, not surprisingly, very particular about being paid the correct amount at the correct time
The process of determining each employee's pay is called a **payroll run**
SAP ERP system evaluates the input data and notes any discrepancies in an error log
Remuneration Elements
base pay, bonuses, gratuities, overtime pay, SICK pay, and vacation allowances the employee has earned during the pay period
Statutory and Voluntary Deductions
paycheck withholdings, including taxes (federal, state, local, Social Security, and Medicare), company loans, and benefit contributions

Travel Management
A travel request, which may originate with the employee or the employee's manager, is the first step in the travel management process

Training and Development Coordination
allows companies to plan and implement employee development and training activities that maximize an employee's ability to contribute to the organization
Requirements
are skills or abilities associated with a position
Qualifications
are skills or abilities associated with a specific employee
Succession Planning
outlines the strategy for replacing key employees when they leave the company or move to another position within the company

Manufacturing Extended Game

HEC MONTRÉAL ERP SIMULATION GAME – Manufacturing Game – powered by ERPsim

User: $_1 to $_9
Initial password: ERPSIM

Adapted for Fiori and for SAP GUI with Fiori Visual Theme Activated

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Last Update: June 28, 2023

FORECAST SALES

Create Planned Indep. Req. (MD61)

1. Select *Product group* and enter the following information
   - Product group: $$–F
2. Continue
3. Enter your forecast quantities in the 2nd date column
4. Save

CALCULATE REQUIREMENTS

MRP Run (MD01)

1. Press ***Enter*** or click Execute
2. Ignore orange warnings
   Press two more times on ***Enter***
3. In the pop-up window, click Continue

ORDER MATERIALS

Create Purchase Orders (ME59N)

1. Make sure the *Fixed Vendor* field is empty
2. Execute

! Purchase orders are created

! If no open requisitions: *No suitable requisitions found*

RELEASE PRODUCTION

Convert Planned Orders (CO41)

1. Run Selection

! If no planned order: *Planned order could not be selected*

2. Select orders
3. Convert

! If conversion fails, click on ✕ to see log

PLAN MARKETING BUDGET

Marketing Expense Planning (ZADS)

1. Enter your daily amount of marketing expenditure for each product per area
2. Save

MAINTAIN PRICES

Change Price List (VK32)

1. Open the *Prices* folder and double click on ***Price list***
2. In *Distribution channel*, enter 10, 12 or 14
3. Execute
4. Modify your prices
5. Save

FINANCIAL STATEMENTS

Financial Statements (F.01)

1. In *Company Code*, enter your <company code>*
2. GUI step: Select ALV Tree Control
   FIORI step: In *Statement Version*, enter SIM1
3. GUI step: Execute
   FIORI step: Go

STOCK LEVELS

Inventory Report (ZMB52)

Shows stock levels for both finished products and raw materials

Shows quantities of raw materials reserved for production

CASH FLOW

Liquidity Planning (ZFF7B)

Displays an estimate of your cashflow for the coming weeks

PROCUREMENT TRACKING

Purchase Order Tracking (ZME2N)

Shows the details and the status of each purchase order

Shows the dates of expected goods delivery

Procurement Sourcing (ZME13)

Shows the price of each raw material sold by vendors

PRODUCTION SCHEDULE

Production Report (ZCOOIS)

Shows released production orders

For each order, the time released, started and finished (or to start and finish if incomplete)

If Target Qty > Conf. Qty production is still pending

PRODUCTION COST

Product Cost Planning (ZCK11)

Shows variable and fixed costs for each finished product

Recalculates costs based on production capacity and productivity level

Shows daily amounts of fixed costs (overhead, depreciation and S, G & A)

SALES AND MARKET DATA

Summary Sales Report (ZVC2)

Shows aggregate daily sales by product

Detailed Sales Report (ZVA05)

Shows sales related info such as sales revenue by region

Price Market Report (ZMARKET)

Shows aggregate market sales data of past 5 days

CHANGE PRODUCT DESIGN

Validated BOM Change (ZCS02)

1. Select the material to change by clicking Edit BOM
2. Change quantities and Save

! If received error messages, click on Continue to modify the entries

LOAN REPAYMENT

G/L Account Posting (FB50)

1. In *Journal Entry Date*, select today's date
2.

	1st Line	2nd Line
Account	113300	113101
D/C	Credit	Debit
Amount	???	???

3. *Click on Simulate* and then Post

SETUP TIME REDUCTION

G/L Account Posting (FB50)

1. In *Journal Entry Date*, select today's date
2.

	1st Line	2nd Line
Account	113300	478000
D/C	Credit	Debit
Amount	???	???

3. *Click on Simulate* and then Post

INCREASE CAPACITY

G/L Account Posting (FB50)

1. In *Journal Entry Date*, select today's date
2.

	1st Line	2nd Line
Account	113300	11000
D/C	Credit	Debit
Amount	???	???

3. *Click on Simulate* and then Post

Manufacturing Extended Game

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Last Update: June 28, 2023

Nut

$$-F01	500g
$$-F11	1kg

20% wheat*
30% oat*
20% nut*
1 box / 1 bag*

*minimum

Blueberry

$$-F02	500g
$$-F12	1kg

20% wheat*
30% oat*
20% blueberry*
1 box / 1 bag*

*minimum

Strawberry

$$-F03	500g
$$-F13	1kg

20% wheat*
30% oat*
20% strawberry*
1 box / 1 bag*

*minimum

Raisin

$$-F04	500g
$$-F14	1kg

20% wheat*
30% oat*
20% raisins*
1 box / 1 bag*

*minimum

Original

$$-F05	500g
$$-F15	1kg

20% wheat*
30% oat*
1 box / 1 bag*

*minimum

Mixed

$$-F06	500g
$$-F16	1kg

20% wheat*
30% oat*
30% fruits & nuts**
1 box / 1 bag*

*minimum
**At least some of all fruits/nut

CUSTOMERS

DC 10: Hypermarkets
Payment Time: 20 days
Approximate Market Size
€90 000 per team per week

DC 12: Grocery Chains
Payment Time: 10-20 days
Approximate Market Size
€360 000 per team per week

DC 14: Independent Grocers
Payment Time: 1-20 days
Approximate Market Size
€135 000 per team per week

SUPPLIERS (V01, V02)

Lead time (days)	1-5
Payment time (days)	20

STORAGE CAPACITY AND COSTS

Product type	Current space	Cost per additional 50 000 units*
Finished products	250 000 boxes	€500/day
Raw materials	250 000 kg	€1 000/day
Packaging (bags and boxes)	750 000 units	€100/day

FIXED COSTS (€ paid each 5 days)*

Labor	20 000
Manufacturing overhead	15 000
S, G & A	40 000
Depreciation (Building)	1 250
Depreciation (Equipment)	50 000**

PRODUCTION CAPACITY

Capacity (units/day)	24 000
Additional Capacity Cost (€ per 1 000 units)	1 000 000**
Minimum/Maximum Lot Size	16 000/48 000

**Investing in additional capacity will increase equipment depreciation costs

SETUP TIME

Setup time (hours)	Expense (€)
8	-
7	50 000
6	125 000
5	250 000
4	500 000
3	1 250 000

Create Planned Independent MD61
MRP Run MD01
Create Purchase Order ME59N
Purchase Order Tracking ZME2N
Convert Planned Order CO41
Inventory Report ZMB52
Summary Sales Order Report ZVC2
Sales Order Report ZVA05

create a flow chart from this concept (SAP ERP Simulator), use the symbols for appropriate use such as circle for start & end, parallelogram for input and output, rectangle for process, diamond for decision, document for data, and cylinder for database:
Planning:
Step 1. Create Planned Independent MD61
Step 2. MRP Run MD01

Procurement:
Step 3. Create Purchase Order ME59N

Monitor the Deliveries:
Step 4. Purchase Order Tracking ZME2N

As the Deliveries Arrived:
Step 5. Convert Planned Order CO41

Monitor the Finished Goods, Raw Materials, and Packaging:
Step 6. Inventory Report ZMB52

Check what products are the most selling:
Step 7.1. Summary Sales Order Report ZVC2
Step 7.2. Sales Order Report ZVA05

and then repeat the process from Step 1. Create Planned Independent MD61. this time order the most selling products only.