OrderServices

1. Sub- orderdevelerede (ændrer orderstatus)

Calculation Services

1. Sub- orderdevelerede-sub (begynd beregning)
2. Pub- Mtogo Erning (add in google cloud topic)
3. Pub- Restaunete E (add in google cloud topic)
4. Pub- Agent E (add in google cloud topic)
5. Make those classes (copy from order management services)
6. install pubsub dep, appsettings add connection to google cloud, add connection in program.cs

Restaurant Services

1. Sub- OrderCreated-sub (kun hvis vi har websocket)
2. Pub- food is ready (add in google cloud topic)
3. Make those classes (copy from order management services)
4. Add connection in program.cs

OrderDelivering services

1. Lav Alt Sub- OrderCreated-sub (begynd at lave order levering – hent adressen fra sub )
2. Pub- orderdevelerede (add in google cloud topic)
3. Make those classes (copy from order management services)
4. install pubsub dep, appsettings add connection to google cloud, add connection in program.cs

Dashboard services

1. Lav Alt
2. Make those classes (copy from order management services)
3. install pubsub dep, appsettings add connection to google cloud, add connection in program.cs

Kubernetes

1. deploy hver image og setup deres 2 filer i hver services
2. CI/CD med git actions
3. Api gateway
4. Frontend (websocket)
5. Video
6. Synopsis (miro)
7. Readme file (Digrams og beskrivelse)

microservices (calculation services):

we will recive order object. From “pub/sub”

recivce from sub: order entitie: id, restaurantid, totalPrice, orderDatetime , DeliveringDatetime, customerId, deliveringadresse,

Table: entity agent bonus: agentid, amount, DeliveringDatetime, order id

Table entity mtogo earning: ? amount, datetime, order id

Table entity restaurant earning ?: amount, datetime, orderid

we have 3 main logic:

1. Mtogo earning: metogo fee: based on order.totalrpice

First 100 Kr 16%

Amount to 500 Kr 15%

Amount to 1.000 Kr 14%

Anything more 13%

1. restaurant earning:

order.total price – mtogo earning.

1. Agent bonus:

Employees will get 5 % as bonus from Mtogo.amount value before VAT (moms) only between 18:00-06:00

microservices (Restauant services):

* + **Responsibilities**:
    - **Enter adress then shows all restaurants in that area (rest api)**
    - Displaying all restaurant information. (rest api)
    - Then choose a restaurant and then display menus (rest api)
    - Receiving and confirming orders from MTOGO.
    - Handling food preparation status updates (receive from payment sub).
    - Handling food preparation status updates (done) (pub)
  + **Entities**: Restaurant, Order Details(list of all selected items from the menu).
  + **Value object**: menu items (in this case we will avoid menu but connect menu items with a restaurant)
  + **Interactions**: Works with Order Management Context for receiving orders and Delivery Management Context for notifying when an order is ready.

microservices (Order services):

* + **Responsibilities**:
    - create a order (order id, customer id, restaurant id , ordered time, total price, from order details, status if delivered or not)
    - create a order details(list of menu items that choosed from the specific restaurant with their price, and which order it belongs to)
    - Processing mock payment confirmation.
    - pub orderdetails
  + **Entities**: Order, Orderdetails, mock payment gateway simple api endpoint which always accept the payment. Pub new order created and payment went through
  + **Interactions**: Interfaces with the Restaurant Management Context.

microservices (Delivering services):

* + **Responsibilities**:
    - create a agent (agent id, name)
    - create a orderDelivering (order id, )
    - create
    - create a order details(list of menu items that choosed from the specific restaurant with their price, and which order it belongs to)
    - Processing mock payment confirmation.
    - pub orderdetails
  + **Entities**: Order, Orderdetails, Leveringdetails, mock payment gateway simple api endpoint which always accept the payment. Pub new order created and payment went through
  + **Interactions**: Interfaces with the Restaurant Management Context.

Kode:

1. Kode – logic – entity – value object – aggregate – error handling ? (\*)
2. Test
3. Design pattern (Filter – Port - Adapter) (\*)
4. Pub-sub (Hvad forventer du at modtag ? sub) (hvad forventer du at sende afsted ? pub) (\*)
5. Rest api (\*)
6. Dockerfile (image) (\*)
7. Database connection (hvordan er bedst at gøre med docker compose) ? (\*)
8. Api gateway (kræver at opsætte først google cloud – vent indtil vider) (\*)

Opsætning - github:

1. Projekt – user stories osv.
2. Git-action – til main
   1. CI dvs. Test alt
   2. CD derefter deploy det.

Opsætning – google cloud:

1. Install Cgloud – sæt vores user/project osv. (\*)
2. Opret login(rolebased) (\*)
3. Api gateway (helt til sidst, når vi har sat Kubernetes op, pubsub og alle endpoints osv.)
4. Deploy vores project – dvs. flere server, kubernetes, pubsub (\*)

Lige nu:

Mtogo repo:

1. deploy – docker compose – (hvordan sætter det op i google ? smider vi en tom mappe med yml eller kun yml file som docker compose ? hvad med kubnetes ?)

Calculation

1. pub/sub (hvordan skriver vi kode ? hvad sætter vi det sammen i google med topic ?)
2. CI/CD (Github test først inden og når det ind på main deploy det i google server)
3. docker – (vi har lavet file, men hvordan bliver den image lavet af sig selv efter vi har deployet det i google ?)

Restaurant

1. pub/sub
2. CI/CD
3. docker
4. deploy – docker compose

lille frontend – login

test apigateway

vi ved hvordan pub/sup virker

den virker -> CI/CD (vores test går igennem)

docker og docker compose med kubneters er setup.

FROM mcr.microsoft.com/dotnet/sdk:8.0@sha256:35792ea4ad1db051981f62b313f1be3b46b1f45cadbaa3c288cd0d3056eefb83 AS build-env

WORKDIR /App

# Copy everything

COPY . ./

# Restore as distinct layers

RUN dotnet restore

# Build and publish a release

RUN dotnet publish -c Release -o out

# Build runtime image

FROM mcr.microsoft.com/dotnet/aspnet:8.0@sha256:6c4df091e4e531bb93bdbfe7e7f0998e7ced344f54426b7e874116a3dc3233ff

WORKDIR /App

COPY --from=build-env /App/out .

ENTRYPOINT ["dotnet", "CalculationManagementService.dll"]

docker build -t

services:

user-service:

build:

context: ./UserService

ports:

- "5000:5000"

order-service:

build:

context: ./OrderService

ports:

- "5001:5000"

* + 1. KODE
    2. Pubsub / rest endpoint
    3. Kubernetes
    4. CICD
    5. Api Gateway
    6. En liile frontend

APIGatway setup:   
  
swagger: '2.0'

info:

title: Multi-Microservice API

description: API Gateway configuration for Restaurant, Order, Delivery, Calculation, and Analytics services with REST and Pub/Sub

version: 1.0.0

schemes:

- https

produces:

- application/json

paths:

# RestaurantManagementMicroservice

/restaurant/menu/{itemId}:

get:

summary: Get menu item from Restaurant Management

operationId: getMenuItem

parameters:

- in: path

name: itemId

type: string

required: true

description: ID of the menu item

responses:

'200':

description: Menu item retrieved successfully

x-google-backend:

address: https://restaurant-management.namespace.svc.cluster.local

path\_translation: APPEND\_PATH\_TO\_ADDRESS

/restaurant/pubsub/menu-updates:

post:

summary: Publish menu update to Pub/Sub

operationId: publishMenuUpdate

parameters:

- in: body

name: message

schema:

type: object

properties:

topic:

type: string

description: Pub/Sub topic name

menuItemId:

type: string

description: Updated menu item ID

responses:

'200':

description: Menu update published successfully

x-google-backend:

address: https://pubsub.googleapis.com/v1/projects/YOUR\_PROJECT\_ID/topics/{topic}:publish

protocol: https

# OrderManagementMicroservice

/order/create:

post:

summary: Create a new order

operationId: createOrder

parameters:

- in: body

name: order

required: true

schema:

type: object

properties:

customerId:

type: string

items:

type: array

items:

type: string

responses:

'201':

description: Order created successfully

x-google-backend:

address: https://order-management.namespace.svc.cluster.local

path\_translation: APPEND\_PATH\_TO\_ADDRESS

/order/pubsub/order-status:

post:

summary: Publish order status update to Pub/Sub

operationId: publishOrderStatus

parameters:

- in: body

name: message

schema:

type: object

properties:

topic:

type: string

description: Pub/Sub topic name

orderId:

type: string

description: Order ID

status:

type: string

description: Updated status

responses:

'200':

description: Order status published successfully

x-google-backend:

address: https://pubsub.googleapis.com/v1/projects/YOUR\_PROJECT\_ID/topics/{topic}:publish

protocol: https

# DeliveryManagementService

/delivery/assign:

post:

summary: Assign delivery to an agent

operationId: assignDelivery

parameters:

- in: body

name: delivery

required: true

schema:

type: object

properties:

orderId:

type: string

deliveryAgentId:

type: string

responses:

'200':

description: Delivery assigned successfully

x-google-backend:

address: https://delivery-management.namespace.svc.cluster.local

path\_translation: APPEND\_PATH\_TO\_ADDRESS

/delivery/pubsub/delivery-tracking:

post:

summary: Publish delivery tracking update to Pub/Sub

operationId: publishDeliveryTracking

parameters:

- in: body

name: message

schema:

type: object

properties:

topic:

type: string

description: Pub/Sub topic name

trackingId:

type: string

description: Tracking ID

location:

type: string

description: Current location

responses:

'200':

description: Delivery tracking published successfully

x-google-backend:

address: https://pubsub.googleapis.com/v1/projects/YOUR\_PROJECT\_ID/topics/{topic}:publish

protocol: https

# CalculationManagementMicroservice

/calculation/calculate-bonus:

post:

summary: Calculate delivery bonus

operationId: calculateBonus

parameters:

- in: body

name: bonusDetails

required: true

schema:

type: object

properties:

deliveryAgentId:

type: string

completedOrders:

type: integer

responses:

'200':

description: Bonus calculated successfully

x-google-backend:

address: https://calculation-management.namespace.svc.cluster.local

path\_translation: APPEND\_PATH\_TO\_ADDRESS

/calculation/pubsub/calculate-report:

post:

summary: Publish calculation report to Pub/Sub

operationId: publishCalculationReport

parameters:

- in: body

name: message

schema:

type: object

properties:

topic:

type: string

description: Pub/Sub topic name

reportId:

type: string

description: Report ID

responses:

'200':

description: Calculation report published successfully

x-google-backend:

address: https://pubsub.googleapis.com/v1/projects/YOUR\_PROJECT\_ID/topics/{topic}:publish

protocol: https

# AnalyticsReportingService

/analytics/report:

get:

summary: Get analytics report

operationId: getAnalyticsReport

responses:

'200':

description: Analytics report retrieved successfully

x-google-backend:

address: https://analytics-reporting.namespace.svc.cluster.local

path\_translation: APPEND\_PATH\_TO\_ADDRESS

/analytics/pubsub/event-log:

post:

summary: Publish analytics event log to Pub/Sub

operationId: publishAnalyticsEventLog

parameters:

- in: body

name: message

schema:

type: object

properties:

topic:

type: string

description: Pub/Sub topic name

eventId:

type: string

description: Event ID

eventData:

type: string

description: Event details

responses:

'200':

description: Event log published successfully

x-google-backend:

address: https://pubsub.googleapis.com/v1/projects/YOUR\_PROJECT\_ID/topics/{topic}:publish

protocol: https