OccupationMonitor

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OccupationMonitor Use Case
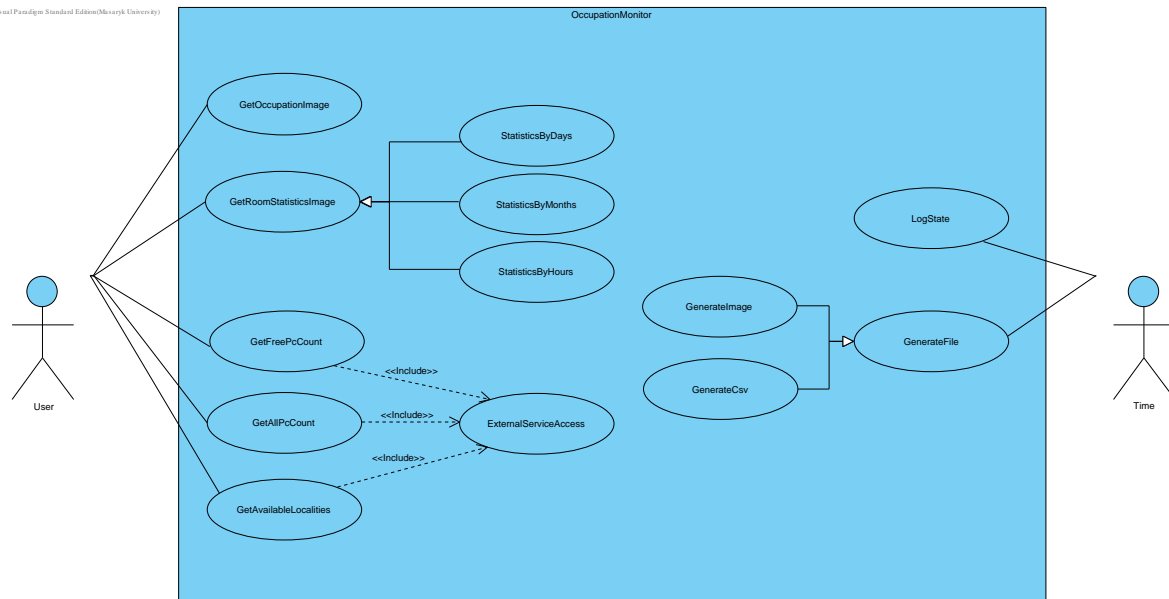
Summary

Name	Description
�½ User	
�½ Time	
StatisticsByMonths	Returns image representing utilization rate of the studyroom by months.
StatisticsByDays	Returns image representing utilization rate of the studyroom by days.
StatisticsByHours	Returns image representing utilization rate of the studyroom by hours.
GenerateFile	Periodically generates file.
ExternalServiceAccess	Accesses external service to find locality.
GenerateCsv	Periodically generates CSV-file representing the state of studyroom.
GenerateImage	Periodically generates image representing state of the studyroom.
LogState	Periodically logs state of the studyroom.
GetAllPcCount	Returns number of all computers in the studyroom.
GetRoomStatisticsImage	Returns image representing utilization rate of the studyroom.

🔵 GetFreePcCount	Returns number of free computers in the studyroom.
🔵 GetAvailableLocalities	Returns list of IDs and names of available localities.
🔵 GetOccupationImage	Returns image representing occupation of the studyroom.
🔲 OccupationMonitor	

Description

Functional requirements

1. System can generate image representing occupation of the room.
2. System can generate statistics of utilization of room.
3. System can return number of all computers in room.
4. System can return number of available computers in room.
5. System can list all available rooms.
6. State of room can be periodically logged.
7. Image of room can be periodically generated.
8. CSV-file representing the room can be periodically generated.

Non-functional requirements

1. System will be implemented in C#.
2. System will generate images in less than 5 seconds.
3. System will serve at least 50 users at the same time.

Details

👤 User

👤 Time

🔵 StatisticsByMonths

🔵 StatisticsByDays

🔵 StatisticsByHours

🔵 GenerateFile

🔵 ExternalServiceAccess

🔵 GenerateCsv

🔵 GenerateImage

LogState

GetAllPcCount

GetRoomStatisticsImage

GetFreePcCount

GetAvailableLocalities

GetOccupationImage

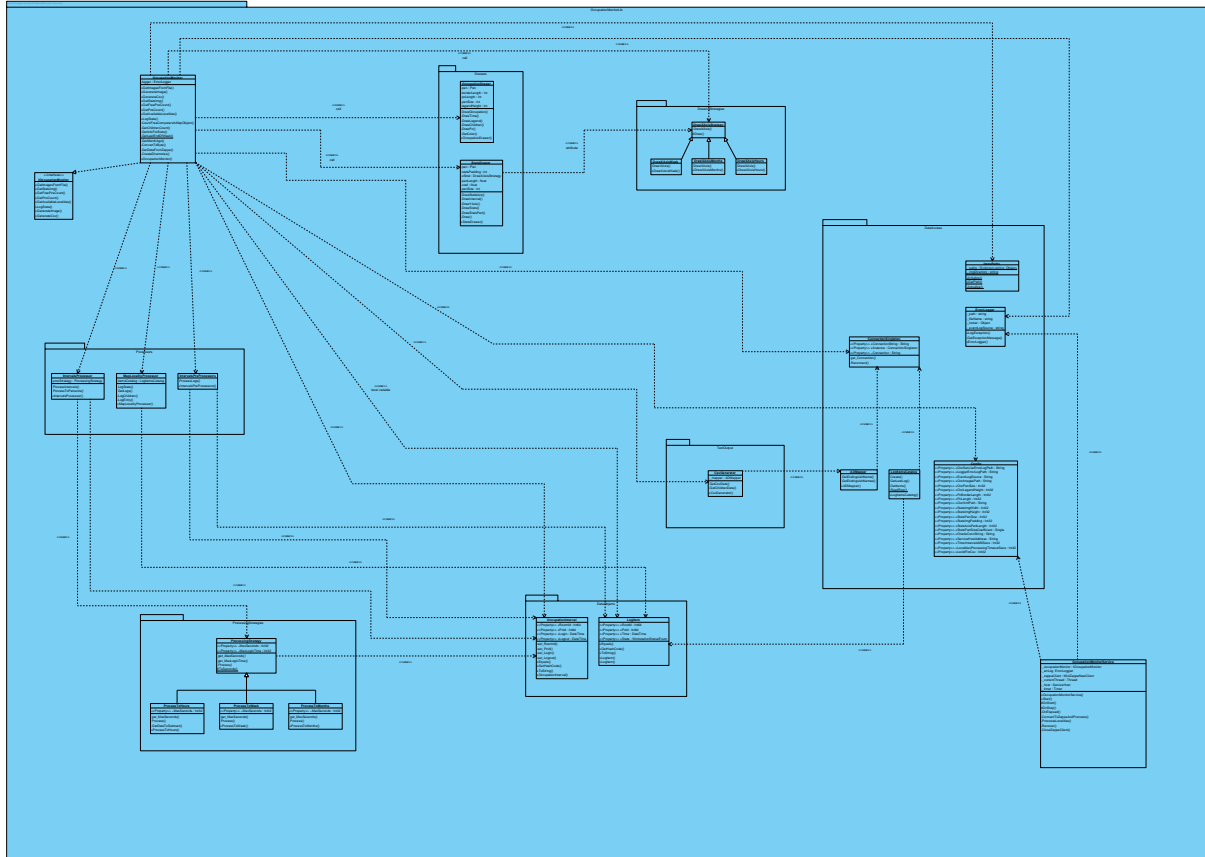**OccupationMonitor**

Children

Name	Description
GetOccupationImage	Returns image representing occupation of the studyroom.
GetAvailableLocalities	Returns list of IDs and names of available localities.
GetFreePcCount	Returns number of free computers in the studyroom.
GetRoomStatisticsImage	Returns image representing utilization rate of the studyroom.
GetAllPcCount	Returns number of all computers in the studyroom.
LogState	Periodically logs state of the studyroom.
GenerateImage	Periodically generates image representing state of the studyroom.
GenerateCsv	Periodically generates CSV-file representing the state of studyroom.
ExternalServiceAccess	Accesses external service to find locality.
GenerateFile	Periodically generates file.
StatisticsByHours	Returns image representing utilization rate of the studyroom by hours.
StatisticsByDays	Returns image representing utilization rate of the studyroom by days.
StatisticsByMonths	Returns image representing utilization rate of the studyroom by months.

OccupationMonitor Class Diagram

Summary

Name	Description
📁 OccupationMonitorLib	
📁 Drawers	
📄 OccupationMonitor	
📄 OccupationDrawer	
📁 DrawingStrategies	
📄 DrawXAxisStrategy	
📄 DrawXAxisWeek	
📄 DrawXAxisMonths	
📄 DrawXAxisHours	
📄 StatsDrawer	
📄 IOccupationMonitor	
📁 DataAccess	
📄 ImgsPaths	
📄 ErrorLogger	
📄 ConnectionSingleton	
📁 Processors	

IntervalsProcessor	
MapLocalityProcessor	
IntervalsPreProcessors	
TextOutput	
Config	
ADMapper	
LogItemsCatalog	
CsvGenerator	
DataObjects	
ProcessingStrategies	
OccupationInterval	
LogItem	
ProcessingStrategy	
OccupationMonitorService	
ProcessToHours	
ProcessToWeek	
ProcessToMonths	

Details

OccupationMonitorLib
Children

Name	Description
Drawers	
OccupationMonitor	
DrawingStrategies	
IOccupationMonitor	
DataAccess	
Processors	
TextOutput	
DataObjects	
ProcessingStrategies	
OccupationMonitorService	
Enums	
MiniZappa	

Drawers
Children

Name	Description
OccupationDrawer	
StatsDrawer	

OccupationMonitor

OccupationDrawer

DrawingStrategies

Children

Name	Description
DrawXAxisStrategy	
DrawXAxisWeek	
DrawXAxisMonths	
DrawXAxisHours	

DrawXAxisStrategy

DrawXAxisWeek

DrawXAxisMonths

DrawXAxisHours

StatsDrawer

IOccupationMonitor

DataAccess

Children

Name	Description
ImgsPaths	
ErrorLogger	
ConnectionSingleton	
Config	
ADMapper	
LogItemsCatalog	

ImgsPaths

ErrorLogger
ConnectionSingleton
Processors

Children

Name	Description
IntervalsProcessor	
MapLocalityProcessor	
IntervalsPreProcessors	

IntervalsProcessor
MapLocalityProcessor
IntervalsPreProcessors
TextOutput

Children

Name	Description
CsvGenerator	

Config
ADMapper
LogItemsCatalog
CsvGenerator
DataObjects

Children

Name	Description
OccupationInterval	
LogItem	

ProcessingStrategies

Children

Name	Description
ProcessingStrategy	
ProcessToHours	
ProcessToWeek	
ProcessToMonths	

OccupationInterval

LogItem

ProcessingStrategy

OccupationMonitorService

ProcessToHours

ProcessToWeek

ProcessToMonths