Микроуслуга 1: Събиране на данни: тази микроуслуга получава данни от сензори за GPS координатите на обекта. След като данните бъдат получени, микроуслугата съхранява данните от реда в базата данни.

Микроуслуга 2: Регистрация на потребителите: обслужва интерфейса за регистрацията на потребителите, които ще използват системата.

Микроуслуга 3: Визуализация на карта: въз основа на ГИС уеб карта и GPS, системата може да визуализира местоположението върху картата.

Интеграция с брокер на съобщения

## Примери:

- 1) Глава 13 от учебника по програмиране за разпределени системи
- 2) <a href="https://github.com/MongkonEiadon/VehicleTracker">https://github.com/MongkonEiadon/VehicleTracker</a>
- 3) https://pdf.sciencedirectassets.com/308315/1-s2.0-S2352146517X00136/1-s2.0-
- S2352146517309845/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEKD%2F%2F%2F%2F
- %2F%2F%2F%2F%2FwEaCXVzLWVhc3QtMSJHMEUCIG%2BVinZ5CDNui
- %2FYegI7WlsuZBo%2BVNAuZTR6aBsd8oYQDAiEAn4rmZseb%2FzPE0OLFlqm1Dx
- %2FHz9zHbv9VQPXXFgKSkJsqvAUIif%2F%2F%2F%2F%2F%2F%2F%2F%2F%2F
- %2FARAFGgwwNTkwMDM1NDY4NjUiDFRBxkZsR6LdzGo50CqQBYYHKAM91J4J7%2FKC6fG5QE5r8aVhJ
- $\frac{\%2B2EokX4X9Y4sTjhpq1brJq9qqWSxVU6Ol1sgQNFiE6\%2FC4bljDplZ98gDNTYJh9RrapO0jfzpw}{b70Ur0mN8Bl44c4\%2BcMOwlgHWE6imuKEBfbC1miC84RiqNzzTnMl5XKVtNMOfR7HMBZ7qW}\\ \underline{eOeXScjRDBD7vjK6OxjnCg\%2BjI1PMHLnc0IWync3jINHjS1KCNOQUQYdl2jy1iDxBex8Z}\\ \%2F2JE4RfFiAmNS8v\%2BWb08o8d$
- %2ByAtZoyTR5Jnp31TVLZtx3QInKynLSnxTbAtkpY2t2jG1KzMNdTD%2B
- %2Fixxg2MXIaKVghjqTN2nj
- $\underline{\%2BHR2ws1tBp58l4Zsvdv571yOs3wXw3a40PNOs6WXZK3uwvjo5W38cyUFDLjd15WI69HdU7ogxagzHYah1oEIgpF2wB\%2BR}$
- $\underline{\%2BpiywPhyUT0\%2FOt3SNpYiJ2sw88l7XdgsVAVgWXIwE0STg5ALS3b5h6Ivj70PKx3HiO3kFYv}$
- $\underline{D\%2FZ\%2FhcYXdA1E2aRvJCQQoM6DpGxxj9egyIEGqH0adNDquoUN8W5SZsrFiUmqANrd}$
- $\underline{\%2FMHIp3uT8dJisuvUZXdQPXqZ4xnfrba4qiWMYnKFzNXRqoz87ZuFshoL59bdgn4Ao4LD}$
- %2BdpcLjlQ01MOkBbQSLYtZferS0zaPplKmKNxK50L3rnVxrntKBv07g0xhRHvA9tYL
- %2Bz8tRpQ0erN6r%2FQL7pqIX8cE00vTmMvl%2F2r4%2FIMyu8Q
- <u>%2BjRLSOOojytaevUwZ63dPtoTCKIykcGYDp4483gMeQgYS3aDCbJ5UBHA8nugJf7pP9LHOmA</u>DRJ2Y4CogMvX1W1zNL4jlhLUqcz0V1WIpCPbtwWX7hj3Ki9z%2B1XJPej9xRhm
- %2FMbDN0MPD1zqEGOrEBzBojRHjzRT0s7zZK0UYPrywa3%2FAcDXxGz6teXWsgTeNF1sAHFCUmqDzLg%2BB4FvZOMa7s8iPZBHwvkQY
- %2FkQIJA1%2FJUTqeklXvr6xP6u4j9XUEN72dzf8L01efaMUSxKplYni5Bd
- %2BKHLCOAipa3KS7x6MFmcylCKoCiYQAPkk1csQS6IXHu9U4%2FxkeTnvPTnXwUG8C3C3kE
- EzgDx2FpyBHDLVfZEKgQ4SO2WRjCjFDKy03&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-
- Amz-Date=20230410T083633Z&X-Amz-SignedHeaders=host&X-Amz-Expires=300&X-Amz-
- Credential=ASIAQ3PHCVTY44BYIZXJ%2F20230410%2Fus-east-1%2Fs3%2Faws4\_request&X-Amz-
- $\frac{Signature=a258624a1c68851e78fb94dad1e754ea3195d069aacc8b16cc457c1e4df243bc\&hash=aacff9575d5c7824124483fa6a525878c92a6cb790c3033331806869fe79a51b\&host=68042c943591013ac2b2430a89b270f6af2c76d8dfd086a07176afe7c76c2c61\&pii=S2352146517309845\&tid=spdf-99f42b84-5b8a-480b-bd13-$
- <u>342394ae1dfe&sid=129fbe6490ee32403a3a23095c8ec2be49a3gxrqb&type=client&tsoh=d3d3LnNja</u> WVuY2VkaXJlY3QuY29t&ua=01015503535806560f&rr=7b59a9aed9d43253&cc=bg