# Отчет по лабораторной работе №6 Очереди и отложенное выполнение

### Исходный код:

<https://github.com/filatkinen/socialnet>

### Docker compose:

<https://github.com/filatkinen/socialnet/tree/main/labs/lab06>

### Запуск:

1. git clone <https://github.com/filatkinen/socialnet>
2. cd socialnet/labs/lab06/
3. следовать инструкции в README.md

## Описание решения:

1. web-socket сервер реализован на базе основного приложения через дополнительный хендлер.
2. При создании поста, в отдельной горутине начинает отрабатывать функционал, который отправляет пост в rabbit для всех друзей данного пользователя используя ключ маршрутизации – ID друга.
3. Реализован отдельный клиент ws для проверки функционала.

## Описание идеального решение с возможностью масштабирования.

Повторюсь, в рамках лабораторной работы делать решение, над которым работает команда, очень трудоемко. Но масштабирование решение можно представить таким образом:

%3CmxGraphModel%3E%3Croot%3E%3CmxCell%20id%3D%220%22%2F%3E%3CmxCell%20id%3D%221%22%20parent%3D%220%22%2F%3E%3CmxCell%20id%3D%222%22%20value%3D%22Application%2FHTTP%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%221%22%3E%3CmxGeometry%20x%3D%2290%22%20y%3D%22130%22%20width%3D%22110%22%20height%3D%22110%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%223%22%20value%3D%22Application%2FHTTP%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%221%22%3E%3CmxGeometry%20x%3D%22100%22%20y%3D%22210%22%20width%3D%22110%22%20height%3D%22110%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%224%22%20value%3D%22Application%2FHTTP%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%221%22%3E%3CmxGeometry%20x%3D%22110%22%20y%3D%22300%22%20width%3D%22110%22%20height%3D%22110%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%225%22%20value%3D%22Rabbits%20and%20workers%201%20line%26lt%3Bbr%26gt%3B%D0%BF%D0%BE%D0%BB%D1%83%D1%87%D0%B0%D0%B5%D0%BC%20%D1%81%D0%BE%D0%BE%D0%B1%D1%89%D0%B5%D0%BD%D0%B8%D0%B5%20%D1%81%20%D0%BF%D0%BE%D1%81%D1%82%D0%BE%D0%BC%2C%20%D0%BF%D0%B5%D1%80%D0%B2%D1%8B%D0%B9%20%D1%81%D0%B2%D0%BE%D0%B1%D0%BE%D0%B4%D0%BD%D1%8B%D0%B9%20%D0%B2%D0%BE%D0%BA%D0%B5%D1%80%20%D0%B7%D0%B0%D0%B1%D0%B8%D1%80%D0%B0%D0%B5%D1%82%2C%26amp%3Bnbsp%3B%20%D0%BF%D0%BE%D0%BB%D1%83%D1%87%D0%B0%D0%B5%D1%82%20%D1%81%D0%BF%D0%B8%D1%81%D0%BE%D0%BA%20%D0%B4%D1%80%D1%83%D0%B7%D0%B5%D0%B9%20%D0%B8%20%D1%80%D0%B0%D1%81%D0%BA%D0%B8%D0%B4%D0%B2%D0%B0%D0%B5%D1%82%20%D0%BF%D0%BE%20rabbit%D0%B0%D0%BC%2C%20%D0%BA%D0%BE%D1%82%D0%BE%D1%80%D1%8B%D0%B5%20%D0%BC%D0%BE%D0%B3%D1%83%D1%82%20%D0%B1%D1%8B%D1%82%D1%8C%20%D0%BF%D0%BE%D0%B4%D0%B5%D0%BB%D0%B5%D0%BD%D1%8B%20%D0%BD%D0%B0%D0%BF%D1%80%D0%B8%D0%BC%D0%B5%D1%80%20%D0%BF%D0%BE%20%D0%B3%D0%B5%D0%B3%D1%80%D0%B0%D1%84%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%BE%D0%BC%D1%83%20%D0%BF%D1%80%D0%B8%D0%B7%D0%BD%D0%B0%D0%BA%D1%83.%22%20style%3D%22swimlane%3BwhiteSpace%3Dwrap%3Bhtml%3D1%3BstartSize%3D100%3B%22%20vertex%3D%221%22%20parent%3D%221%22%3E%3CmxGeometry%20x%3D%22250%22%20y%3D%22120%22%20width%3D%22310%22%20height%3D%22430%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%226%22%20value%3D%22rabbit%26lt%3Bbr%26gt%3B(Work%20Queues)%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%225%22%3E%3CmxGeometry%20x%3D%2220%22%20y%3D%22128%22%20width%3D%22100%22%20height%3D%22100%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%227%22%20value%3D%22worker%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%225%22%3E%3CmxGeometry%20x%3D%22175%22%20y%3D%22148%22%20width%3D%22100%22%20height%3D%22100%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%228%22%20value%3D%22worker%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%225%22%3E%3CmxGeometry%20x%3D%22160%22%20y%3D%22218%22%20width%3D%22100%22%20height%3D%22100%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%229%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D0%3BentryY%3D0.5%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D0.5%3BexitY%3D1%3BexitDx%3D0%3BexitDy%3D0%3B%22%20edge%3D%221%22%20parent%3D%225%22%20source%3D%226%22%20target%3D%2213%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%2230%22%20y%3D%22200%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22110%22%20y%3D%22180%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2210%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%229%22%3E%3CmxGeometry%20x%3D%22-0.0755%22%20y%3D%223%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2211%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D0%3BentryY%3D0.5%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D1%3BexitY%3D0.5%3BexitDx%3D0%3BexitDy%3D0%3B%22%20edge%3D%221%22%20parent%3D%225%22%20source%3D%226%22%20target%3D%227%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%2285%22%20y%3D%22150%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22170%22%20y%3D%22210%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2212%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%2211%22%3E%3CmxGeometry%20x%3D%220.0711%22%20y%3D%22-2%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2213%22%20value%3D%22worker%22%20style%3D%22whiteSpace%3Dwrap%3Bhtml%3D1%3Baspect%3Dfixed%3B%22%20vertex%3D%221%22%20parent%3D%225%22%3E%3CmxGeometry%20x%3D%22130%22%20y%3D%22278%22%20width%3D%22100%22%20height%3D%22100%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2214%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D-0.012%3BentryY%3D0.35%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D0.75%3BexitY%3D1%3BexitDx%3D0%3BexitDy%3D0%3BentryPerimeter%3D0%3B%22%20edge%3D%221%22%20parent%3D%225%22%20source%3D%226%22%20target%3D%228%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%22100%22%20y%3D%2270%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22160%22%20y%3D%22200%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2215%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%2214%22%3E%3CmxGeometry%20x%3D%22-0.0755%22%20y%3D%223%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2216%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D0%3BentryY%3D0.5%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D1%3BexitY%3D0.5%3BexitDx%3D0%3BexitDy%3D0%3B%22%20edge%3D%221%22%20source%3D%224%22%20target%3D%226%22%20parent%3D%221%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%22330%22%20y%3D%22330%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22390%22%20y%3D%22460%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2217%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%2216%22%3E%3CmxGeometry%20x%3D%22-0.0755%22%20y%3D%223%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2218%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D0%3BentryY%3D0.5%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D1%3BexitY%3D0.5%3BexitDx%3D0%3BexitDy%3D0%3B%22%20edge%3D%221%22%20source%3D%223%22%20target%3D%226%22%20parent%3D%221%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%22230%22%20y%3D%22365%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22280%22%20y%3D%22280%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2219%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%2218%22%3E%3CmxGeometry%20x%3D%22-0.0755%22%20y%3D%223%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2220%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BentryX%3D0%3BentryY%3D0.25%3BentryDx%3D0%3BentryDy%3D0%3BexitX%3D1.015%3BexitY%3D0.369%3BexitDx%3D0%3BexitDy%3D0%3BexitPerimeter%3D0%3B%22%20edge%3D%221%22%20source%3D%222%22%20target%3D%226%22%20parent%3D%221%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%22220%22%20y%3D%22275%22%20as%3D%22sourcePoint%22%2F%3E%3CmxPoint%20x%3D%22280%22%20y%3D%22280%22%20as%3D%22targetPoint%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2221%22%20value%3D%22Post%22%20style%3D%22edgeLabel%3Bhtml%3D1%3Balign%3Dcenter%3BverticalAlign%3Dmiddle%3Bresizable%3D0%3Bpoints%3D%5B%5D%3B%22%20vertex%3D%221%22%20connectable%3D%220%22%20parent%3D%2220%22%3E%3CmxGeometry%20x%3D%22-0.0755%22%20y%3D%223%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20as%3D%22offset%22%2F%3E%3C%2FmxGeometry%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2222%22%20value%3D%22Actor%22%20style%3D%22shape%3DumlActor%3BverticalLabelPosition%3Dbottom%3BverticalAlign%3Dtop%3Bhtml%3D1%3BoutlineConnect%3D0%3B%22%20vertex%3D%221%22%20parent%3D%221%22%3E%3CmxGeometry%20x%3D%22-10%22%20y%3D%22230%22%20width%3D%2230%22%20height%3D%2260%22%20as%3D%22geometry%22%2F%3E%3C%2FmxCell%3E%3CmxCell%20id%3D%2223%22%20value%3D%22%22%20style%3D%22endArrow%3Dclassic%3Bhtml%3D1%3Brounded%3D0%3BexitX%3D0.5%3BexitY%3D0.5%3BexitDx%3D0%3BexitDy%3D0%3BexitPerimeter%3D0%3B%22%20edge%3D%221%22%20source%3D%2222%22%20parent%3D%221%22%3E%3CmxGeometry%20width%3D%2250%22%20height%3D%2250%22%20relative%3D%221%22%20as%3D%22geometry%22%3E%3CmxPoint%20x%3D%22330%22%20y%3D%22358%22%20as%3D%22sourcePoint%22%2F%3E%3C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