

Budget planner

1. Установил Emscripten по инструкции с официального сайта:

```
git clone https://github.com/emscripten-core/emsdk.git
```

```
cd emsdk
```

```
./emsdk install latest
```

```
./emsdk activate latest
```

```
source ./emsdk_env.sh
```

2. Скомпилировал проект командой из README:

```
emcc main.c -o index.js -s WASM=1 -O2 -s  
EXPORTED_RUNTIME_METHODS=['stringToUTF8','UTF8ToString'] -s  
EXPORTED_FUNCTIONS=['_main','_jsAddExpense','_jsDeleteExpense','_jsClearAllExpenses',  
'_jsGetTotalExpenses','_jsGetExpenseCount','_jsGetCategoryCount','_getExpenseJSON',  
'_getCategoryTotalJSON','_freeMemory','_malloc','_free'] --shell-file  
index.html -s ALLOW_MEMORY_GROWTH=1
```

3. Запустил локальный сервер

```
python3 -m http.server 8000
```

4. В index.html добавил выпадающий список для фильтрации:

```
<div class="form-group">
```

```
<label for="filterCategory">Filter by Category:</label>
```

```
<select id="filterCategory">
```

```
<option value="all">All Categories</option>
```

```
<option value="Food">Food</option>
```

```
<option value="Transport">Transport</option>
```

```
<!-- другие категории -->
```

```
</select>
```

```
</div>
```

5. В app.js добавил обработчик фильтрации:

```
document.getElementById('filterCategory').addEventListener('change', function()
{
    const category = this.value;
    updateExpenseTable(category);
});
```

```
function updateExpenseTable(filterCategory = 'all') {
    const expenseCount = Module._jsGetExpenseCount();
    expenseTableBody.innerHTML = "";
```

```
    if (expenseCount === 0) {
        expenseTableBody.appendChild(noExpensesRow);
        return;
    }
```

```
    for (let i = 0; i < expenseCount; i++) {
        const expenseJsonPtr = Module._getExpenseJSON(i);
        if (expenseJsonPtr === 0) continue;
```

```
        const expenseJson = Module.UTF8ToString(expenseJsonPtr);
        const expense = JSON.parse(expenseJson);
```

```
        // Применяем фильтр
```

```
        if (filterCategory !== 'all' && expense.category !== filterCategory) {
            Module._freeMemory(expenseJsonPtr);
            continue;
        }
    }
}
```

```
}
```

6. В main.c добавил функцию для получения списка категорий:

```
char* EMSCRIPTEN_KEEPALIVE getCategoriesJSON() {  
    char* json = (char*)malloc(MAX_STRING_LENGTH * MAX_CATEGORIES);  
    if (json == NULL) return NULL;  
  
    strcpy(json, "[");  
    for (int i = 0; i < categoryCount; i++) {  
        if (i > 0) strcat(json, ",");  
        strcat(json, "\"");  
        strcat(json, categoryTotals[i].name);  
        strcat(json, "\"");  
    }  
    strcat(json, "];");  
  
    return json;  
}  
./emsdk install latest
```

7. Результат

Budget Planner - WebAssembly Application

Budget Planner / Expense Tracker

Track your expenses and manage your budget with WebAssembly

Add New Expense

Date:

26 . 04 . 2025

Category:

-- Select Category --

Amount:

Description:

Add Expense

Clear All Expenses

Expense List

Date	Category	Amount	Description	Action
2025-04-26	Transport	\$56877.77	hfhhdht	<div>Delete</div>

Expense Summary

Total Expenses: \$56877.77

Category Breakdown:

Transport: \$56877.77