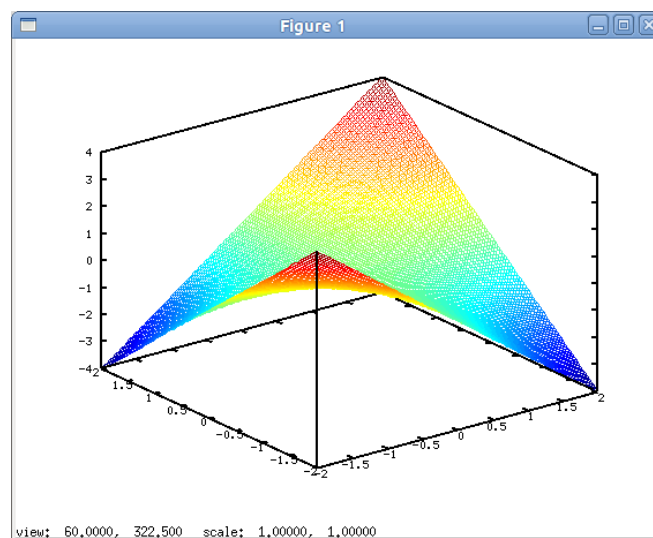# IALP 2011 – Octave TP5-solutions

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Exercise 1:

file `funxy.m`:
```
function z = funxy(x, y)
z = x.*y;
endfunction
```

file `main.m`:
```
clear all;
[x, y] = meshgrid(linspace(-2, 2, 101), linspace(-2, 2, 101));
z = funxy(x, y);
mesh(x, y, z);
```


Exercise 2:
```
clear all;
a = 1:10;
fact = cumprod(a);
f = fopen("factorial.txt", "w");
fprintf(f, "%g\n", fact);
fclose(f);
```
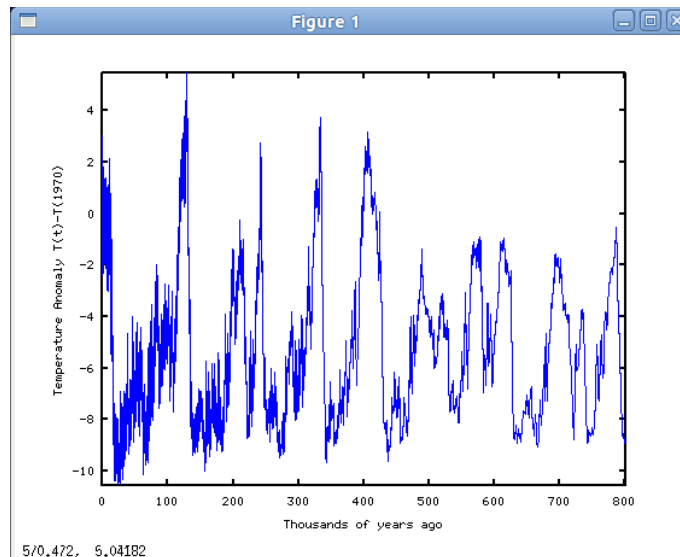
Exercise 3:
```
clear all;
f = fopen("factorial.txt", "r");
fact = fscanf(f, "%g");
```

```
fclose(f);
```

Exercise 4:
```
f = fopen("EDC.TXT", "r");
% read data that are in 5 columns:
a = fscanf(f, "%g", [5, Inf]);
fclose(f);
% The time is in the second column:
time = a(2,:);
% The temperature is in the fourth column:
temperature = a(4,:);
% Plot the data:
plot(time, temperature);
% Label the figure axes:
xlabel('Thousands of years ago');
ylabel('Temperature Anomaly T(t)-T(1970)');
% Adjust scale to exactly fit the data:
axis tight;
```


Now try to do the same for the CO_2 data in the same plot!