

<textit info> author=Roman Putanowicz title=Solution to exercise 6.1.1

</textit> [back](#)

Solution to exercise 6.1.1

<sxh c> h = figure(); axis([-5,5,-5,5]); xy = []; # array of vertex coordinates stp = 0; quitchar = [-1, toascii("Q")]; closechar = [toascii("cC")]; while stp == 0

```
[x,y,b] = ginput(1);
if sum(b == quitchar) # request for exit
    break;
endif
xy= [x;y];
while 1
    [x,y,b] = ginput(1);
    cp = [x;y];
    if b == 1 # draw new segment apped coords to xy
        xs = [xy(1,end), x];
        ys = [xy(2,end), y];
        line(xs,ys);
        xy = [xy, cp];
    elseif sum(b == closechar) # close the polyline finish drawing
        xs = [xy(1,1), xy(1,end)];
        ys = [xy(2,1), xy(2,end)];
        line(xs,ys);
        break;
    elseif sum(b == quitchar) # request for exit
        stp = 1;
        break;
    endif
endwhile
```

endwhile </sxh>

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    break;
elseif sum(b == quitchar) # request for exit
    stp = 1;
    break;
endif
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endwhile endwhile \end{lstlisting} </texit>

Description:

- variable stp defined in line 4 is used to indicate that the user requested termination of the program,
- in line 5 and 6 we calculate vector of codes for the keys (we also handle the case of the pressed caps lock). The letter "q" is special because its code is -1,
- in line 9, 21, 26 we check if the even key 'b' is equal to any of the defined key values,
- the variable cp defined in line 15 is used to hold coordinates of the mouse cursor as a column vector,
- in line 20 we append the current point coordinates the the matrix that stores coordinates of already clicked points.

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