DVS first assignment

Due time: 10/8/1383

- Solve problems number 6, 7, 8, 9, 10 and 11 from chapter 1 and number 1, 2, 5, 6 and 7 from chapter 2.
- Develop code and compose a brief report for following problems. Do not omit any valuable points such as your innovation and memory saving policies.
  1. Develop code for visualizing function $f(x, y, t) : R^3 \rightarrow R$. (e.g. $f(x, y, t) = x^2 + y - 2xy$), your function should accept input function as a string. Normalize all of the variables in the range of $[-1, 1]$.
  2. Develop code for showing aliasing effect in temporal domain.
      (hint: sample the function $f(x, y, t) = 0.2\sin(2\pi x) + 0.2\sin(2\pi y) + 0.5\sin(2\pi 20t)$ with sampling frequency $f_s = 25$ and reconstruct it).
  3. Develop code for performing morph effect (during which image $A$ changes to $B$ smoothly), through an image sequence.