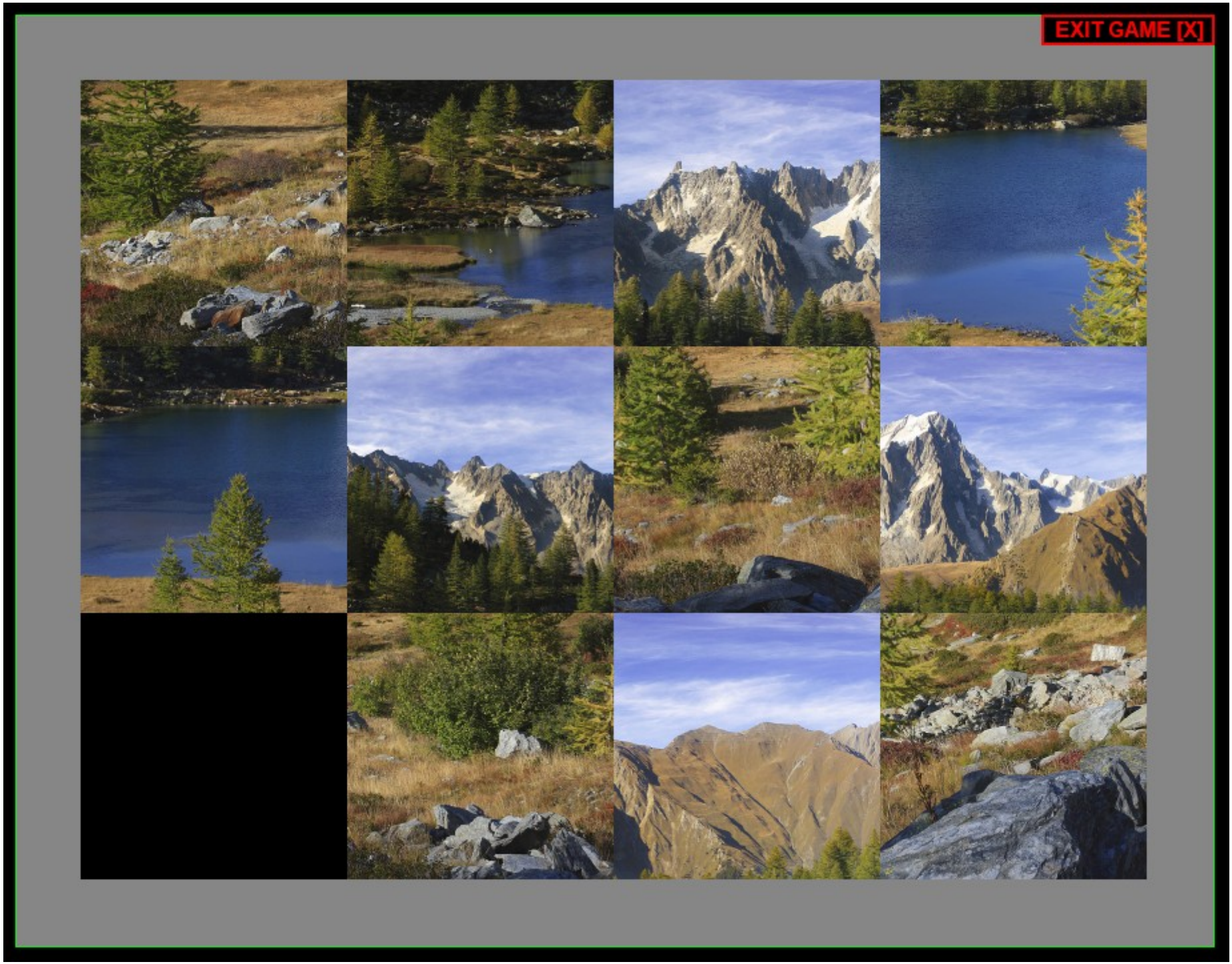
EXIT GAME [X]

Image puzzle : Just scramble your preferred image and then try to reconstruct it….
Script and files are available in a zipped file here

```
clear all;clc;
global Z0 A M T i j
function scramble
  global Z0 A M T i j
  a1 = (i-1)*200 + 50;a2 = i*200 + 49;b1 = (j-1)*200 + 50;b2 = j*200 + 49;
  switch (true)
    case i>1 && T(i-1,j)==0;  % --------- UP
      v = T(i,j);T(i,j) = 0;--i;T(i,j) = v;
      M(a1:a2,b1:b2,1:3) = Z0;
      a1 = (i-1)*200 + 50;a2 = i*200 + 49;
      ti = floor((v+3)/4);tj = mod((v+3),4) + 1;
      M(a1:a2,b1:b2,1:3) = A{ti,tj};
    case j<4 && T(i,j+1)==0;  % --------- RIGHT
      v = T(i,j);T(i,j) = 0;++j;T(i,j) = v;
      M(a1:a2,b1:b2,1:3) = Z0;
      b1 = (j-1)*200 + 50;b2 = j*200 + 49;
      ti = floor((v+3)/4);tj = mod((v+3),4) + 1;
      M(a1:a2,b1:b2,1:3) = A{ti,tj};
   case i<3 && T(i+1,j)==0;   % --------- DOWN
      v = T(i,j);T(i,j) = 0;++i;T(i,j) = v;
      M(a1:a2,b1:b2,1:3) = Z0;
      a1 = (i-1)*200 + 50;a2 = i*200 + 49;
      ti = floor((v+3)/4);tj = mod((v+3),4) + 1;
      M(a1:a2,b1:b2,1:3) = A{ti,tj};
   case j>1 && T(i,j-1)==0;   % --------- LEFT
      v = T(i,j);T(i,j) = 0;--j;T(i,j) = v;
      M(a1:a2,b1:b2,1:3) = Z0;
      b1 = (j-1)*200 + 50;b2 = j*200 + 49;
      ti = floor((v+3)/4);tj = mod((v+3),4) + 1;
      M(a1:a2,b1:b2,1:3) = A{ti,tj};
  endswitch
endfunction

% ---------- LEVEL : 20=super easy  50=easy  200=normal  500=difficult
LEVEL = 200;
% ---------- IMAGE FOR THE PUZZLE -----------------------------------
LANDSCAPE = 'landscape_1.png';    % 600 x 800 (h x w)
% User can select other images, provided they are 600 x 800 (h x w)
```

```
% ---------------------------------------------------------------------

Z0 = zeros(200,200,3);
T = [1 2 3 4;5 6 7 8;9 10 11 12];
iL = randi(3);jL = randi(4);i = iL;j = jL;
T(iL,jL) = 0;T1 = T; % assign black square

for h=1:LEVEL
  px = randi(4); % 1=up  2=right  3=down  4=left
  if px == 1 && i>1;--i;v = T(i,j);T(i,j) = 0;T(i+1,j) = v;endif
  if px == 3 && i<3;++i;v = T(i,j);T(i,j) = 0;T(i-1,j) = v;endif
  if px == 2 && j<4;++j;v = T(i,j);T(i,j) = 0;T(i,j-1) = v;endif
  if px == 4 && j>1;--j;v = T(i,j);T(i,j) = 0;T(i,j+1) = v;endif
endfor

figure(1,'position',[10,10,1161,860],'graphicssmoothing','off','resize','off','color',[0,0,0]);
M = imread('master.png');       % 700 x 900
B = imread(LANDSCAPE);
M(50:649,50:849,1:3) = B;
M(338:363,290:605,1:3) = imread('start.png');
image(M);axis('off');
[x,y,buttons] = ginput(1);

for i = 1:3
  for j = 1:4
    a1 = (i-1)*200 + 1;a2 = i*200;b1 = (j-1)*200 + 1;b2 = j*200;
    A{i,j} = B(a1:a2,b1:b2,1:3);
  endfor
endfor
for i = 1:3
  for j = 1:4
    a1 = (i-1)*200 + 50;a2 = i*200 + 49;b1 = (j-1)*200 + 50;b2 = j*200 + 49;
    t  = T(i,j);ti = floor((t+3)/4);tj = mod((t+3),4) + 1;
    if t==0
      M(a1:a2,b1:b2,1:3) = Z0;
    else
      M(a1:a2,b1:b2,1:3) = A{ti,tj};
    endif
  endfor
endfor

image(M);axis('off');
```

```
do
  [x,y,buttons] = ginput(1);
  if x>50 && x<850 && y>50 && y<650;
    j = ceil((x-50)/200);
    i = ceil((y-50)/200);
    scramble;
    image(M);axis('off');
    if T1==T; % victory
      a1 = (iL-1)*200 + 50;a2 = iL*200 + 49;b1 = (jL-1)*200 + 50;b2 = jL*200 + 49;
      M(a1:a2,b1:b2,1:3) = A{iL,jL};
      M(1:26,595:900,1:3) = imread('solved.png');
      image(M);axis('off');
      return % exit
    endif
  endif
until (buttons==27 || (x>800 && y<40))
close(1);
```