```
import pygame from pygame.locals import *
```

```
 \begin{array}{l} laby\_DK = [[2,\,0,\,0,\,1,\,1,\,1,\,1,\,1,\,0,\,1,\,0,\,0,\,1,\,1,\,1],\,[0,\,1,\,0,\,0,\,0,\,0,\,0,\,0,\,1,\,0,\,1,\,1,\\ 0,\,1,\,1,\,1],\,[0,\,0,\,1,\,1,\,0,\,1,\,0,\,0,\,0,\,1,\,0,\,0,\,1,\,1,\,1],\,[1,\,0,\,0,\,0,\,1,\,1,\,1,\,1,\,1,\,0,\,0,\,0,\,1,\\ 1,\,1,\,1],\,[0,\,0,\,0,\,1,\,0,\,0,\,0,\,0,\,0,\,1,\,1,\,1,\,0,\,0,\,1],\,[1,\,1,\,0,\,1,\,1,\,1,\,1,\,0,\,1,\,1,\,0,\,0,\,0,\\ 1,\,1],\,[0,\,0,\,0,\,1,\,1,\,1,\,0,\,0,\,0,\,0,\,1,\,1,\,1,\,1,\,1],\,[0,\,1,\,0,\,0,\,0,\,1,\,1,\,0,\,1,\,0,\,0,\,0,\,1,\,1,\\ 1],\,[0,\,1,\,1,\,0,\,0,\,0,\,1,\,0,\,1,\,0,\,0,\,0,\,1,\,1,\,1],\,[1,\,1,\,1,\,0,\,0,\,1,\,1,\,1,\,1,\,0,\,1,\,1,\,1,\,1,\,1],\,[1,\,1,\,1,\,0,\,1,\,1,\,0,\,0,\,1,\,1,\,1,\,0,\,1,\,1,\,0,\,1,\,1],\,[0,\,0,\,1,\,0,\,0,\,0,\,1,\,0,\,0,\,0,\,0,\,1,\,1,\,1],\,[1,\,0,\,0,\,0,\,1,\,1,\,0,\,0,\,1,\,1,\,0,\,1,\,1,\,0,\,1,\,1],\,[1,\,0,\,0,\,0,\,0,\,0,\,0,\,1,\,1,\,0,\,0,\,1,\,1,\,0,\,1,\,1],\,[1,\,0,\,0,\,0,\,0,\,0,\,0,\,1,\,1,\,0,\,0,\,1,\,0,\,0,\,0,\,0,\,1]] \end{array}
```

largeur, $hauteur = len(laby_DK[0])$, $len(laby_DK)$

def init_fond(): fenetre.blit(fond, (0,0)) for x in range(largeur): for y in range(hauteur): if laby_DK[y][x] == 1: fenetre.blit(mur, Rect(30x, 30y, 30, 30)) elif laby_DK[y][x] == 2: fenetre.blit(entree, Rect(30x, 30y, 30, 30)) elif laby_DK[y][x] == 3: fenetre.blit(sortie, Rect(30x, 30y, 30, 30))

def move_right(pos): global perso perso = dk_droite x_pos, y_pos = pos[0]//30, pos[1]//30 if x_pos < largeur-1 and laby_DK[y_pos][x_pos+1] != 1: return pos.move(30, 0) else: return pos

def move_left(pos): global perso perso = dk_gauche x_pos, y_pos = pos[0]//30, pos[1]//30 if x_pos > 0 and laby_DK[y_pos][x_pos-1] != 1: return pos.move(-30, 0) else: return pos

def move_up(pos): global perso perso = dk_haut x_pos, y_pos = pos[0]//30, pos[1]//30 if y_pos > 0 and laby_DK[y_pos-1][x_pos] != 1: return pos.move(0, -30) else: return pos

def move_down(pos): global perso perso = dk_bas x_pos, y_pos = pos[0]//30, pos[1]//30 if y_pos < hauteur - 1 and laby_DK[y_pos+1][x_pos] != 1: return pos.move(0, 30) else: return pos

pygame.init()

#Ouverture de la fenêtre Pygame fenetre = pygame.display.set_mode((450, 450)) pygame.display.set caption("DK Labyrinthe")

#Texte victoire myfont = pygame.font.SysFont("Deja Vu Sans MS", 80) texte = "Gagné!" label_victoire = myfont.render(texte, True, (255, 0, 0),)

 $\# Chargement\ et\ collage\ du\ fond\ = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGofenetre.blit(fond,\ (0,0))$

 $\label{local_equation} $$\# Chargement des images dk_bas = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGamedk_haut = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGame/DK/dk_haut.png").com dk_gauche = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGame/DK/dk_gauche.png"). dk_droite = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGame/DK/dk_droite.png").$

perso = dk droite

 $position_perso = perso.get_rect() \ mur = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/Pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGame/DK/depart.png").convert sortie = pygame.image.load("/home/cedric/Travail/AlgoInfo/CodesPython/PyGame/DK/arrivee.png").convert_fenetre.blit(perso, position_perso)$

 $\# Rafraîchissement de l'écran pygame.display.flip() pygame.key.set_repeat(400, 30)$

$$\label{eq:boundary_equation} \begin{split} \#BOUCLE \ INFINIE \ continuer &= \ True \ while \ continuer: \ for \ event \ in \ pygame.event.get(): \ \#Attente \ des \ événements \ if \ event.type &== \ QUIT: \ continuer &= \ False \ if \ event.type &== \ KEYDOWN: \ if \ event.key &== \ K_DOWN: \ position_perso &= \ move_down(position_perso) \ if \ event.key &== \ K_LEFT: \ position_perso &= \ move_right(position_perso) \ if \ event.key &== \ K_LEFT: \ position_perso &= \ move_left(position_perso) \ \#Re-collage \ \# \ fenetre.blit(fond, \ (0,0)) \ init_fond() \ fenetre.blit(perso, \ position_perso) \ \#Rafraichissement \ pygame.display.flip() \ if \ laby_DK[position_perso[1]//30][position_perso[0]//30] \ &== 3: \ continuer &= \ False \ fenetre.blit(label_victoire, ((450-myfont.size(texte)[0])//2, \ (450-myfont.size(texte)[1])//2)) \ pygame.display.flip() \ pygame.time.delay(2000) \ pygame.quit() \ \end{split}$$