## logoUM.jpg

Métodos Determinísticos de Investigação Operacional - MDIO 2019/2020

### Mestrado Integrado em Engenharia Informática

# Trabalho 1

Grupo 25

10608934_736136076435933_1694580566_n.jpg

![Uma imagem com pessoa, homem, parede

Descrição gerada automaticamente](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEASABIAAD/4SymRXhpZgAATU0AKgAAAAgABwALAAIAAAAmAAAIbgESAAMAAAABAAEAAAExAAIAAAAmAAAIlAEyAAIAAAAUAAAIuodpAAQAAAABAAAIzoglAAQAAAABAAARJuocAAcAAAgMAAAAYgAAIUYc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFdpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQAV2luZG93cyBQaG90byBFZGl0b3IgMTAuMC4xMDAxMS4xNjM4NAAyMDE5OjA5OjExIDA4OjU5OjU4AAAEkAMAAgAAABQAABEQkpEAAgAAAAQwMjMAoAEAAwAAAAEAAQAA6hwABwAACAwAAAkEAAAAABzqAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMjAxOTowOToxMSAwODo1OTo0MwAAAAAB6hwABwAAEAwAABE4AAAAABzqAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAQMAAwAAAAEABgAAARoABQAAAAEAACGUARsABQAAAAEAACGcASgAAwAAAAEAAgAAAgEABAAAAAEAACGkAgIABAAAAAEAAAr5AAAAAAAAAGAAAAABAAAAYAAAAAH/2P/bAEMACAYGBwYFCAcHBwkJCAoMFA0MCwsMGRITDxQdGh8eHRocHCAkLicgIiwjHBwoNyksMDE0NDQfJzk9ODI8LjM0Mv/bAEMBCQkJDAsMGA0NGDIhHCEyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMv/AABEIAHgAeAMBIQACEQEDEQH/xAAfAAABBQEBAQEBAQAAAAAAAAAAAQIDBAUGBwgJCgv/xAC1EAACAQMDAgQDBQUEBAAAAX0BAgMABBEFEiExQQYTUWEHInEUMoGRoQgjQrHBFVLR8CQzYnKCCQoWFxgZGiUmJygpKjQ1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4eLj5OXm5+jp6vHy8/T19vf4+fr/xAAfAQADAQEBAQEBAQEBAAAAAAAAAQIDBAUGBwgJCgv/xAC1EQACAQIEBAMEBwUEBAABAncAAQIDEQQFITEGEkFRB2FxEyIygQgUQpGhscEJIzNS8BVictEKFiQ04SXxFxgZGiYnKCkqNTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqCg4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2dri4+Tl5ufo6ery8/T19vf4+fr/2gAMAwEAAhEDEQA/APRs0uaYBk0Z9zQAc0m7B5oAcJKUP6GgBd3vQW9RQAmR2ozQAbhRk/SmAmefWigQyjn1pDDJHekyfY/hQAbsf/qp2898YoAgur6xs4993dRQKenmOBVFPEWhu+1NXtC3oZQKAsaYOVDKQVIyCDwaMkdRmmAufalzQAbvQUFvU0AIWwOuKKBDc0ZpDDdRmgBM+orzLxP49u5ZJrbRDshUlDOPvH1I9B6UpOyKhHmZ5vc3888zSSyPJIeS7tkn8arC5YsSSd31pFPQ6bwz401Xw9IFSYz2ZPzW7nKjPp/dNe2aTrNtrWnRXtqwKOOVPVD3B96pMhqxe3eh/CkzTELuoxnoRQIQYB2kflRQAzNLmkMQGlzQBi+Kb/8As/wzqE4JDeUUXB53N8o/UiuasvDelrY26yxDzEQZbPU45rmryasdmFine5h3vgeyJYxSsGPTmsObwa6n5ZDSjVdjWdBD7XwnLGVLuCGOGBGeK3fhtfz2Hia/0OZjsILKPde/4g/yrSnPmkc9anyRR6sKWtzlCigA+tFAEW6l3Uhhu96C1AHL+OYjP4bkI/5ZTRSEeoDgf1qs6sY1YHbxXLiN0d2E2ZRlEgJcSA+wNN2NJg7gprLodImxkBYvux6Gue8Hu0vxTMg6LFIX9/lx/MitaHxHNivhPZN+e1Ga6zhHZozQIM0UAV91G+kUJvpC1AGJ4lO7RpItrN5ronHbLDmvK/EN9qFvdT4nv3w2dyvsUc9AKwk05pM6qaapuSJfDE2o6hfpa+bIxYfxkE/nVXXdRv7S9nt/tEy+WxUiMAHjrzUK3PY2bfs7lfSLl5rmHD3itkEFpCQee46V1/gawkT4g6tc52xpGyj3JKn+WPzrSOkznqK8LnqYVm6YJo5BwSK3OYMk0ZoELmigCpupu6pKEL+9NMhxz0pXHYpX4Se1dD0BD/ipBH8q5zU9Gh1CMvNIF+lc1bSSZ34VXi0O8N6VbWNx50A+7wXPf2qjrmj2l5evLN8hdvvg96xUne51OCtYfY6Na2Ee5H8wnucVteFLMQT6hekktPL37Y4wPwC1tR1kcuJ0idNuLdW4pytjhRXWecO384zQWA96YhR60UAUi1ML1maIYXphc/8A66VxmNrfiLS9FiA1G6EXmjCqFLMR64Hauai1MX0PnLJmEru47j1rGsnZM6cLK0mjD1TW59yyabKI41BVl3tg/XtmodO1G8LSzai0klu4+UZbaPccYqFFcvmdLlPmv0Nv7Y0cKyCQ+UeRk84qXwn47luNQi0+5giSB5DHEyAhsk8E+uT/ADrbDxvc5MXLZHo4cngVKG2itzkDjGSeafGec0xEm7/69FMRns2O9GRisWbIhfI74qrdXS21rLPICUiQuQPQDNAzwvXNRn1jUpLq4O5ycgZ4Ueg9queHZro2jy7swRShXz2DZ6+3X86qsly2Cg3znT3zJDYAwLgbcjYcA/Wq2k3bSL5rx5PTLkmuJfDc9V1GvdWxla7LO32gwf6uJMfL0GTj/P0rnoLh4mR1Yqy8gjgiu3D6I8rEtuR9EW0rG3jJYMxQEsO/HWrAbJqjIkByetTKcCmIcDRVCKEp4zx+FR+ZxjvWDNUQ3N5b28BluZkijHVnOBXmnjHxdBeQLaafLN5W4+a+NocdvfHWrpxu7im9LHBtICcg10HhzU7eCKWymUATNnJ6HjpSrxco6FYeSjNXJNQa9shiDdJbZwoHOPY1QS7v5JtsasiZ5zwKwiotXOmcpp2RY1G7Frpht1fMs33j3I71z28DnNb0VZXOas7ux3XhHxwulWosr2J3twxKOpyUz2we1eoafqNtqVuJ7OdJo/VT0+o7H61rJdTJPoX1JqUMaQEiUUyTOlbPFcx4n8TpocawxYku3GQGPCD1P+FZqPM7GrdkeXaprV5qUxlup3kY9MngfQdqynfcMmtnpojPfUrEEcr0rS0Cyi1XVkspneMSI22ROqkKSD79Kzloio6sfZa1L5Qgmy69j3p11qXlp8inJGRmsfZ2eh0e2vHUXxRaJp+rLbRMXCwIS7H7xIyT+tY6rnlq2hsc8tyaJsCtPTdWutNuFntLh4ZR3U9fYjuPY1qmQepeGvHlvqZS11ALBdHhXHCSH09j/n2rtVzUtWC9yVTRTEcz4i1QaRpE90CPMA2xAjq54H+P4V4pf3s1zc+dNK0kjNl3Y8k1MFZXLluUXfJpGPy4piIxnFdB4OCJrE078CG3Z8/iB/Impl8I47nPwDMyZ9RSTczPz3pWA2vEbrcXNjOTkvYwk/UDH9Kx6cdEEtwXinqcGqJLCzYwPWvXvh1r8uqaZNZ3UxkuLVhtLnkxnpz3wQR+VVuhHcKaKQjyz4majtFrZKemZW+vRf8A2avNHbJH1qVsW9xgOW+lG7cxpiGitrSlaHRNWvegCLCp9dx5/L5fzqZbFLcwx15p8nMjY9TTA2vE6LBqMFoP9ZbWkMMg9HC8/wA6xaUdge4DrTgaokMnNdl8O742viy3iJwtzG8R/LcP1UfnVITPa1PFFBJ4H411A33iS7YHKxv5a/ReP5g/nXOufu1JoNHAzSL1NIB1dPb4j+HF7kcyXijP/fB/pUyHE5lE3HA7nFaugWn2rxNp8GNwa4UkHuAcn9BTewLcp6pObrVbucnPmTO2fqTVUAswABJJwAKa2FuxXVo5GRxhlOCD2NJnmmhWAHmtjw9cfZfEWnTE4CXCEn2yM047iex9CA0VRmfM1xK0szOxyzHJPrUbdVrNmyEJoXrR1GPFdWsZb4X3D44Gojn/AICKmXQI9TnbMqlxET0DgkfjXQ+A4vtHjO1bGdiSOB/wAj+tEtmEd0cmOg+lPgl8m4jmHVHDfkc1TV1YS3uS6hdi+1Ga5WNYxI2dqjFVu9KC5YpFSd3cRetWImIcMD06VcSJH0Zp1ybzTbW5PWaJXP4gGirMj//ZAP/hMbBodHRwOi8vbnMuYWRvYmUuY29tL3hhcC8xLjAvADw/eHBhY2tldCBiZWdpbj0n77u/JyBpZD0nVzVNME1wQ2VoaUh6cmVTek5UY3prYzlkJz8+DQo8eDp4bXBtZXRhIHhtbG5zOng9ImFkb2JlOm5zOm1ldGEvIj48cmRmOlJERiB4bWxuczpyZGY9Imh0dHA6Ly93d3cudzMub3JnLzE5OTkvMDIvMjItcmRmLXN5bnRheC1ucyMiPjxyZGY6RGVzY3JpcHRpb24gcmRmOmFib3V0PSJ1dWlkOmZhZjViZGQ1LWJhM2QtMTFkYS1hZDMxLWQzM2Q3NTE4MmYxYiIgeG1sbnM6eG1wPSJodHRwOi8vbnMuYWRvYmUuY29tL3hhcC8xLjAvIj48eG1wOkNyZWF0b3JUb29sPldpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQ8L3htcDpDcmVhdG9yVG9vbD48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICA8P3hwYWNrZXQgZW5kPSd3Jz8+/9sAQwACAQECAQECAgICAgICAgMFAwMDAwMGBAQDBQcGBwcHBgcHCAkLCQgICggHBwoNCgoLDAwMDAcJDg8NDA4LDAwM/9sAQwECAgIDAwMGAwMGDAgHCAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwM/8AAEQgAtAC0AwEiAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A/R4N/OhJMjP6VCjZHWnbsD+dWImMuG/wNKLogH5Ru6ZPaoRcqhIzj6d6Qyxkcl/YgCmMmM7n/loi/hQ3mMeJN304qE7ZDjz1+jcZpXjaIcquM9qN9hjjIyOM5b3ApXum2fMx+nYUkb+m7b9ae9qsi/Myj3PFAhILwFvv/MvXNWY705+79ST1qlLorfejkU89AwzUTWxBzvwR2JNMDV+0Mx4k/ClF82/rk+4xWL9rkjPVfxNSwakz/e28e9OwGuL5kGCqsKDfKowflGPzrPS8YD7w2/Wni8DtysJ+rUWAu+fHKfmbGaawjzlpVqiw8zO1Yzg+vSmrNJGeiN3IY5xQBeWbKcbcHvTVYZ9s46dartNub0Oe3Sm+b8vX/wCvTAvYXb0U96jkmVTmqscTydT249KljRWP8Un1GFxQIel2ZB+7Ut2yaRVb+P52Pb+EUkl2rttVWb0IGAPxqMBpjtlY4/uA4/8A10hNWJxIF/iX8KKgM8SHau4gejGiqJKYPAH9aU++PbmoS+4c8+tOD7hwe+PWsjQlWKOVcFWz2Kmk8oxZ2huPQ1E0vHcAe1AuSU+835dKYDmEdyPnU59P/r0ip5YKru64wTTXm3f3t36Uv2guvK7ue9ADGIWTISTPc7sinxyK5yu5Wx0znNIJlC43celZ3izxDpng3w3e6xq19badpunwtcXFzM+2OFF6kn+g5JwACSBTA1o7hrU7vMVlHPPGKbrvjzSfCelG+1zVNJ0mzUc3GoXMdtCP+BuQP1r8yf2v/wDgtxqlhLc6D8N7SGwmnOyPVL1BJcIhyPMEZ+SPIGfm3HH909Pz6+JXx98QfETXZ9U8TeIL7Xr2MFftl/dPM0WTuIBfJA56IT2FZOtHpqdUcNO15aH7meJ/+CpX7PvhzVZrS68dW8htx+9mt9Mu7i1X6TLEUYf7QJU+tN8L/wDBTf8AZ+8X6hb2tv8AEGxsJLptinULK5tIFbOAGmkjESZ7bnFfgNeeP2SJkWS4SF1wcqSWzjnnp+OD2qG18TNCgaGSYtITu5wMEjG9AcFePQ4z27z7WW9ivYwva5/TlZi31fTYLywurW8s7pBLBcW8qyQzIejIy5VgfUHFI0JHZW9iDX8+n7Hv/BRP4qfsd+LjL4Y1OS40WZxJc+H7+QzaffjIL7FLfupCv8aFWyOSw4P7M/sS/wDBRzwf+2xobR6YJNI8UWlqLu90a6O5ki3BDNFIAFljDsFOMMpIyoDKW3jNPY5pU5R3PcVlkgHyrj3zR9oZhlkjbjkleRU32qN25QfgeKa0jxgtGePzqyAB3dsjNSCT5eF3enpUJnLD+6x6jApu4Dvz1we9AE0k8zDpGq9uppCGZcs7fieKYLrs25T0Ax/KnSfv/lbhe2P60Eh5qwL80m3cOmacZsQcSIyjvnmqko8rpFu2jkgZpbO4jVgv3VbvikSBuo2ZsTIuDjBoq0NLh5+ZFye43UUwKCze/wCtKr4PXtVcvlv4fehJGK9c1maFh3AHWo0kYtuVsD3qNjkdM+xFCyhFwRj8KNQLCTMo/vfzpPPyPmH4g0xnUAZDH0INNM2M4J/EVQDpJFC/xfj3r89f+CyXxc1r4hfEzwX8EfC63TSahANe1RIHZROS8kduj4Iyi+XM5B4yUPG3Nff11cfw/Ln+tfnP8KvGLfG7/gpV8avFdy8M9t4bmHhrTihDJGlufIYqf9poXPHGZGxx187MMS6OHlNbnrZLg1iMXCnLbd/I+WtZ/ZV8SX+tNp2o+G3+1LGSLqNW2/KCfQggYyQe2a+bvFnw81Kw1fy5rG5n+ztwShCpz1AxgdPQ/nX7pRa5YpZ+W0ceZMgnAye1eW+OvhD4RvpppGsbVmmXYeOWH1r5XC5xKLvJH3+L4fp1ElF6H4t6npF0bhk8tfMz0CkrGB2GeT9TmqNupgRo/OZpFO/DDcq+2Mciv1A+In7F/hnWLhpbezt41bkBUHB9cfnXmmu/sR6LcsfLs4RICP3gGGOPWvZp5tC3vI8Gtw3K/uyPiLRNYa4kjilWP7PH1XaVI9wf0xzxXqHwq+IHiT9lX4l6V4j0fUP7PvrK4N5ps+Q6gkBWR88FGUsrqeGBxx1r6P8ADX7C+l2OlTNLbwzMrER8DDr1BI7Hkqcdev05f9rX9le30f8AZbvtRsQ39oaB/pA3cs8Awu0/QZNKnm8JVYxjprYitw/Onh5Sk7tK5+vP7Lv7Qum/tMfA3w94y01kj/ta2DXVsrljZXC/LLEeh+VwwBPUYPevQlu3+Xpj3HWvzJ/4NyvjldeIvAvjfwfeSeZbae9tqtrk52SSbops/URwH2O7u1fpqsm4V9Ktj4qxP5+f4V/CmtKTz1pm3Hb8KUKzH7tAtRwnXJPzbu+D/KnC6aI5U1HnP8Kk46g0ZGfvYoJLUerSRtnGOOwxUd5KLpT/AHj39ajER/hkcfjQA6D+I/jQA6K5jRArwSFhxkelFNEmR/D+lFAFAT7aUT5FZvzb+e5z1qYTkLxWZoXvN5zuxz60nnMT8rZql57Ef4Un2lmPb296q4F3zGI+5+G7FNlnz/snPrx+dU3u8cPjjqSSD+dRTXoC9Vx0FSA+a4K3CncuAwOWHSvzB/4Jy6L/AMIzrHxO0+4SRL638T3sE4k4kVo5imGHXIKmv0nvb9Qeu72FfntoPj7QfgN8eP2gde8SalDpOmW/jMqhmYBpWlt4pwiL1ZiJAcAHvngE14mdxc8K1Huj6bhmUY4xSltZnr+pyXsd+zRqywKeTnOBXI+JtQ1O8uN0MMywoeufvV5t4u/4Ko/CeFht1DUoY24DS2Miox+oBH41H4N/b48K/EBBHpuoW9wkpICt8rH1AB59PzFfLUcJWjrKLP0CWOw83yxmm/U9Ch8UTTsY2UbsYzjk/hVV7a+SZpIYJGXrnFY03xO0e1kF1I0auy7wAeMVzHiD9vXwP4Ghaa+1ayVUJRUVtzM46jiuj2NSbtFamdStShHmm7I7tbfUnuA0hkjU/wAJ6fnXn37Xeu/Yvgzq9nJJ+7urZ43HXIIrjYP+Cp3hPU4mkTRNfvo8nBtrQsuP944U/n+NZP7T3xT074x/srat4t0Jrj7DCoRo54zHNbSbgrI47EBgcjIIOQSDU08HWhWi6isro4q+YUKlGSpyTdmdF/wbWalKnx8+Ilr5ii1h0BWKsM8/aYQpH4FvQ/Xmv2EM8JGcr+Ffkz/wbT+H7W4u/jJqTX0a3CjSIDbhDvCn7Y2/OMBSQR15KHjiv1WSKONvlyW9a/QI6I/KdzRWUA9/xpRLj736GqadfvY/HrUkci7uJDJ/wHP61RLLSzgD7yntzT/tKsv49hVZ5BGmTtX0BNNFx83ylVbjgUCLiSbqPN453BsVWE7buW6enel85WHTd+NAFh58N95aKrtOAfu0UAYBuM/TPFI15gc/Ss8Xilce/wCVNe63A88Zrn5joSNBrlccH60i3zL/ALPGSMVmNcqh3fdHamSXpYejHnJ6Yo5ikjVa/cruVuT3qNtQZ1wS3uKzX1CSE/KqsPUf1qGbVVuRtXLe+elHNoHLqW7m/XIDf6tjhhnr9K/NLxt4WvPFvg74neJNf0KHUdYvvHVzex2SKWjAXT7CKPKknLfIc56FjjHSv0TuZxHKG+ZpP7xPSvni88HL4UuPFGmpH9qGp6/daiCUw0ZuNshHfgE4H+zivn88nKFNSj/W3+R9fwvThKpKnJXejv2tdNL1uvuR+TXx11z4kWWmG4u7XTYreS4MLabDaCaS3Tsx9QeeB04yecDK8B6TfLqNnHc2NhJMVjnZrVNnkvwSu9QAGGcYGR15PSvvT45/sY6p43v2uofssau2S2zO2sv4MfsS6f4c8Q282pM19NG3Cbdsan6d/wAa8+Oa0vYWcbPyPo45HUeI9qpNxfR9De/aF/Zom8Dfscw+KJGnn3W8Lsg+WRUcqMEjn+IZr87/ABleyWAuGs9DspW0tC6rIo3EZGdm7JOMk4AOQCciv3C+L+mR67+zza6HdIrxmFI5IyOCoGADXwJ44/YVt9b1SSTR7xrNt5xDMN8frweorny3HRh/G1OvNsqnV92jpp2PlP4efF3xZPDaTto7fY7iUxKFQOxAxhtoRSqnOMnPIIwOtfSmr6AuufsQfEe5Ww+yyTWAun+TbvMTq549cA9PU13/AMF/2JL7wjqq3eqNaTJGOCiM3t3Y4ru/2ivAc2pfs8+JPDujrDFfa7DFpMG9/LjD3U0duGY/wqvmAk9gCa6KmNjUxEVTVtV+Z5UstnRw8vay5nbsjs/+CBPwPh+GP7NPiTVLmJl1bxFqsEs3OG8lbVJYRnuNtwSB2LN6197W1mrrhN+7HdjxXgv7Avg5fhr+zTodiskd06syNcoCqz+ViHIBAOB5RAPQ4yOua9mm1mWQBd23v8vHFfYYeblTUn11Pz3H04U8RKnT2Tt92j+9m83hs2cKyzXAUHopl+Y/hVdpogxXzJWI9D/9aseCzkMxkmly7c+9W49ThgXCrnaeOeproOIuovmj5fMVR3PJNOMSxsdrSM3rkVWN5IAS21OOB6VHFctcv94YzQQXlkxwC2O+CKUzrnlj7YxzVF5gPvfjjpTEbzpV29up9KANFpmLf6xR+VFVxk0UyTkRLt5waa118w5qpPc/L/dqtJdlB/U158pHoRiXpLnyx2z6mq818uccbvpjFUZLgs3zFlz7c1Xe7WHPJ+hNRKdjWNMvT6ntfEhUr1CetRXV95qfK2wDsO1UJbhlQlFjkU9upFUprjI+VtvPIJxR7RFcpduJWY/NMo9icV5b8T/FcfhHxnJM7rMJ4I3JJyByyk/ko/Op/j/+0R4X/Zt+Htz4n8XX32TT4D5cSRqHubuUgkRRJkbmIBPJCgAkkDmvhnxN/wAFYPB/7VfjjR9F8PaLr2h6hE1wrTag0Jhu4SoIA2EkMCu4AjHuelceY4edbDSdvP7j08nxccPjIO++n3n1H45/aHWa1kt7Py846ZH559K43Tvj/pvwahbxB40stSMMrRi1MEZaG2JY5aQDLY+6M4IGTn1rz/Q/EdtY+G5NWhEd0Y0MhBJ5YdBzyMGvDfjP+0B/w0DpV7o66hqjS2r7fKsrX92hwdo3HG7k9Fz0GR6/G08O6k+Xotz9TeO5YJQ1b2R9n/ET/got4Q/si8MzeXZoiuG4YFeMbT0546dc8V5dN+0Rp/ju1XXfAy391ZRMUvEnhZB5gxnaGAPQ89uB1zX55J4D1C+1E6VZa9rFxJIfltIrcvJnpjar/dz7V7v8G/F2rfsv+Bhp2oWXiSGM3IeZb/RJook4GfnAO3sfmwP516VbLoQh+7d5focFLMsU6nNWpcsLau6ep9qeFf2jEvLCPzP3e6PkOOB9DVrSdU/4XFruk6Lp72pk1i+ijBmDNGnluJnbC5J2rExA4BOASBkjwfS7+28YeHRrLeXZwz4cAP8AJknjH1r53/bg+MeqaP4M0/SdHnnivl1DzmmtZNpCKmM8c4LOBn3NPLcP7avGLXXU83Pcw9lQc4vW2n6H7l6FDF4f0u106CNo4LGFIYwwwSAAMn3OM1ftdWUuX2rx047V+Vf/AASc/bE1rw78bbH4fatqt5qWg+JLZra3W4uTILS/jjMiyKWOR5u142VcbneM87a/TZLt5E+8Ixjn1FffVaLpNRfY/KVU57s6JdZe6k244zyF7VftL2NMNtXpn3rn9MUxLuMjc/xn0q3NqJhj+Rly3GRUJ30AtXurrLcdyfQc4qxDrrAbdpFULR444SzbdzDkmohe75T6DoaozNe3ka6k7/zxWhGwgiOGX5azdKcxx/Lu3NyWHFTSzsqCPO5n7461e7FtqXPtR/hI+vrRVYyrCAvPA9KKvlRlzM4WaZ1b5sA9T7VDDcrIckZxzketGpK0X8OOuao2V1tj5PzZwMCvFk3uexA0JCsq56HtxyKyrpmY5Rt2B0q5JctCvO1dxAIWq2ohZIi0eFb1PeszoUUZrakyt/dx2NUdV1y1tLGa6vJlt7e1jaaWVjhYkUFmZvYAE/QUX969vnzQrKOhxz+dfMf/AAUT/a18O/Cf4Q+IPCfnT3HifxNpklrFbxDi1hmBRpJW6AFd+FGSTjICndWtGlKpNQiZ1ZqEXJnwP/wUT/a3uv2qPiLNOrTQ+HLWI2ulWbnaYIjyzsBx5rkBm64wq5IUV8wxa3ceCHs5NPmaC7tZllJAxllOQffnt6V0viC8+2XHPVScewJrB8VaSNSSOZcCSE4lAPJT1/D+X0r28RTSXLFaLQ8mE23zPc+ufgv8bL3Wn09L6JrfT9as0YW2DjbIMmYnurEn5h1YMMAqQPoKw8G6N4Y8LJHZi40m4jBf7VbMUkBPOe2R7V5zo/wkuU/Zg8Ayaa0Vp4q8M6WqwPgYcOS720hIPyndjP8AC43DjcDJ4a/aH0/xB4EtbfWvMtL61VoLpXBWRJlOChXnkf0NfmOK9+bnQ2Ts0vXRn7FlVaVCKVZ+9ZNP5K6+/ocn4r+L8mheK5rSbWbiSRpSBOMEyA5HIIORjggnpXrPwk17R4oJJpI7jUprtT5s16+/fk8gDpg+lfPHj3w/pOueKU1SO6X7Ov7zkjDDrz+RruPD3xr8PaBYxx2rF7lRtKE8IQAc4OOxzz6Gt6tG9Ncid+p2TzrETbhXmuXoR/tPeOv+ESsY9Ls/9B08zeeyoMZAIO0fTr9BXyh48+IN54h+J955ySQppgFukUow4ZSclu+4sST9Mdq+nbGdPjb8Q49Su9smj6bJ5oDY23Ei7dvHTapBJz16etfNfx/03T9P+OXib+zbia5t7q7N1Izkbo5ZQJZI89wsjvj0BwckZPu5Co05qm171mz8/wCIpzqxdZP3bpfgWPBnja88M6/Z6lp91Np+oWUqTwXET7ZLeRTuWRW6gqQCD2IFf0DeAfEs2t+D9H1G+x9qvrGC5nRF2qkjxqzAD0DEjFfzlQSGQsu5gJBs4688Gv23/YF/bZs/2uvAN95ulf2PrnhgW8GoW8cvmQyLIriKaMnBAbypAUbJUr95gQa+sxXNKkmun/APj6NlUab3PqCLVHuF+8yr9akjuGMgxlVHvWJaT+aq4fA7Yq/auFOF3cd89a4onRI2ZLv5ML95uOKs2hYN82PUHtWVbSlTu74wMj8607Sb2X+lamLNaJ9sfy/MakilZWzubdjNZ4myv+J61NFNnjJJb16CtKcSJlwZbneoop0fyp/9air5WZcxwVzGnzMtwGkY8qVIx+NYS3MiXeVVpPLB+UfxVrarfKI9qhd4BJIP4CudPnNP+5maEsOX9a8WS0uevBl5tQN4G7NnkEYIqFdZSKGRpmWOOEFpGkbCooGSxJ4AHXJrxb9qr9s3wz+y1Yxx6jJJq3iO5h8210y1IWR1yQHlf7scZIIyck44B5x+b/7Tv7e/jX9oe6lj1TUls9HVsxaRp5aKzTHTf/FK3fc5OD93A4rfC5fVre9su/8AkKrjIU9N2feP7Sf/AAVA+HHwgMtjocreNtYTI8vT5QljG3P3rjDBuf8Ankr+5FfmD+1j+1Hqnx++K974o1azsLOS6SOEw2SsscaxqETIZmJO0AE5GSOgrhtV8VTXUh3SMxbrjisHUXW4Ug8qevvXsU8PSoL93v3PPqVp1n72wl5rS3771ZfXI9arm83jv83B9qxry3a3nZoflX0FJFqrD73PGD71nUnfRhFaaH2H+zJ+102tr/YfiC6UXDgBJ24EjcDPoC3GcYGeeAcDQ+P/AMHZvGstzrfhy6WDVmjIuYScR34AAXJ/hdRwDzkADjAI8E/Zu/Zw1b9qCLxHb+F9UtbfxN4ftob610+5Hlx6lEzOkgWbPySiQwKgZdrGU7nj2gtqfBH9rC40q1XT9YdpoXXak38ag9M+tfI4vLPZVXVwnzR9pgc4jXpLD43rtL+upiy6d4s0+zuoZtOvI3MoMaEg7c56AE8cVN4I+GGu6pcR3OozNptvJlWBbdM6ng4HRc8Dn64r0jU/FFlqcguIbiNo354PauS8Z/Fq18PWkjNJvCA7VTqx61dOpUloopNkV8PRpu8ptpeZ6XqXjzTfhB8OpDCsccdugjhhU4MjdFQfXuewye1fLN/q0mo6hNcTSeZcXUjTSOe7McsfzNexftqfBTUvgJ4a+Hi69fNc+IvFFhcatewRv/o9hETCsNug7uv73fIfvFsDCqCfAXv2OQo/GvVy3DxpRc73bPEzXGSrSVNKyj0NabVY7Ubi3TpXpH7On7R/jH4E+Jf7Y8L67faLeyYEixMGhukGSEmibKSDkkBgcEkjB5ryjT7BrhvNlz7D1rT0W62ylT2OBXuUZW+LbseJUV/U/WT9lj/gsd4d8c/Z9J+I1rH4U1RsJ/alqryabKfV15khzxz869SSgr7g8PajDr2kW1/p95aX2n3iCW3ubaVZoZ0PRkdSVZT6gkV/O3a6qYpV78+vavcP2Xf21vHH7LOtLP4W1lv7Nmk8y60i8Bm067PfdFkbGPH7yMo/AG7HBqeFhLWno+wo1mtJH7mQeYT8w3KO+M1o20hxx+hr5w/Y6/4KLeCf2sIodMVl8M+MtvzaLdzBvtZAyWtZcATDr8uFkABO0qNx+hEuRvxyWrl9nKLtI0501oa0LEHPv+FXrU/7WayrWVse3ua0beXjrWkYmMpGms/ljFFVllx/e6+lFXymfMeZ6rNtQgc7zjn0FeM/tT/td+G/2VvCkl3qUyXmvXkLHS9HR/31444BOPuRBurnjggZPFevaqwZlUcD8vxr8XP2yvj+3x5/aA1/xUkzSaf9qbT9HGflFjESkZA7b/mk/wB6Vq87B4ZVZ+9sj0q1ZwXu7nI/GP436v8AFP4k6nqms3hu9U1KQ3FzNjCu+ANqjsigBVX+FVA7V51quqZh9+/tVDVdQY+KvM3Z8wsPzBqhd3nmsf6160qull0ONR6skFx5n9Oaj1F1WPP86jsCXY8Z2+tR6kxkJXP5Vh0NOYrWp8x/1xVa5s8klev6VJEm1zzz9elSPlV6hqT13Ju0z6i/4JHabcQ/FPxhqaM0ccGlWtidp/jkvoZ1P/fNrJ+dfJMXyEcsdvAxxX2t/wAEydSh8DfB34seJrpVWGzm09o5G6f6Pb38sg/8ixH8vbPxbaQsvkr/ABce2K86nButO3l+R3Ta9lD5naeHNTNp4bj1Cf7RJawttkhWTY823bu2uVKrknHIJGRw2a43V9RbUhIzSs0jKRz0/CuvneGD4UrHHcWO1sRSEXwNy8nnCQxG3zuVAMN5u3BKEbuQBxggDyHaauFNbozlUbSTZ9i/8FZtdTxho/wO8QKVkj1zwcLoHqSXEMn/ALUH618iWdmXfcw464r6I/ad8VReM/2P/wBnO5kYSXOn6frelSAj5gLa4toY8+2xQR9TXgby5GFGKrBU+WmlLo3+YsZUvNteX5Ic8uBtX/8AXUdhIRdN25oL5NMiGGzXc5HIacl0YyDz+dXdN1VwVw3GelZZOV/DpTrWVkenGTuNtPQ73RPEclvLDLHJJHJCyyRurlWiYHIZT1BBAII5BFfpP/wTr/4KsW/iW/sfBHxX1Ty9QuHjtdI8RzZK3jswRILsgfLISQBOflb/AJaEN87/AJXJqv2O33Zq7Dff2hYeW/8AEcN/u9/0rs5ozXLIwlFrVH9KSHZLsClW6EelW4ZcnGfu9eOteA/8E9/2g3/aY/ZP8JeJry6e41mG3Ol6uzH5mvLfEbu3vIuyb6TCvdbWTKE5zu6eprm5eV2ZLndXRpxDKd6KriZYlCkKx780VVmRdnyv+3v8Tm+FP7K/jPUrebyNQurI6XYspwyz3REAZf8AaRXaT/tnntX4meJ9bWTUmt4Ttt7eMRRj2Hf+tfoz/wAFuPjA2naP4V8Jxzfe87WrpAepwYID+tx+lfmLFP8AaL9mJPzZ6965cKuSl5s76nvTI7ibdewhm+ZSf5Gq8s4UNz19aZdS41CP8R6djUCsZrjHOM+lXcztfU0Yn+yafu7nnmqkMzTxuc9eabqtz5iBQePT0ptlxa+7UpPWxVtLjY2/empQeP8ACoEjw54p8nC9cfWkErH0t4bv5vhx/wAE1NSlVTHceLtYunjb+/A5t7PH/ktd/nXzBF8047nPevtD9tf4bf8ACvf+Ce3wcSP9yl/FpU3lAYw02mzXcufrNcSMfdjXxjFC32hV9TXFhZcyc11bOquuVqL7I0rOFV8PXDbf3n2qNR/37eqMyN50meOnap7YH7BIv3czoc9cfI9bnwv+HFx8XPit4d8J2cm268T6taaTFJj7jTypFuPsu/JPYCumMrJtmPWyPc/2u/An/Cv/ANkj9mWxmjVb+48Oarqs+OrJeXkd5CT/ANsp0H4V84s3zV9Ff8FQ/iJb+K/2r9T0jTdsOh+CbO38P6bBG37uCONA5UDtsaTyvpCvpXzjvwpP61nhb+yTfXX73crE29o0umn3aClhn/PNKj5Yf1psXJIof7w9c4+tdJgWmbCqVNOR/f6VEzZh/GkD7TzVoyLE9zvaNeePmPH5Ve0S5L3ik/d6DmsdnDXZ/wBkAGtLS5Nsq/5xVx3Gz9Mv+CAXxbeO/wDiJ4GmkZopIrfX7SPOArK32e4P4h7X/viv00tpMBct26GvxV/4IseNz4X/AG8NGtfM2R+ItMv9NbPRv3P2kD8Wt1/HFftJaycAdPU10y1af9djjk7NpF9pfMbOR+NFRJNx+NFLlM+bzPwr/wCCrHxeX4i/tZ+Klhm8y00OSPRYSD/zwXEv/kYy18vaXJm9x7H+Va/xL8UzeKPEl9e3EjSXF7cSXM7nq7uxZj+JJrn9LYm8HTvXHLS0V0PTitLsbcy5vVX0J/kaLY7SW/Sq8nGoJ/vY61IX2xn6VnF3bNOXSwy8l3vjtUtj/qsf5NVJG5PWrdichvpSj8QSVo2Hn7/u3Q0typ+ySMeiqT+lCrvfn8BU12ix6VcN/wBM2xx7VZnfU+8P+Cuc7eH/ANnv4S6Mw2xwusUYA+Xbb2MUXH4SD86+C7CNZrhd2QoPNfoV/wAFz7OFPhr8GTD/AAzamjt6nyLH/CvgLR4PJmXau7g5HpXDlmtFP1/M7sfpWa9PyRattLx4eabZuVrzaM9wI/8A7Kvfv+CT3gVPG37dnhXzI1aHSYNR1JlP95bWWOM/8Blljb/gP0ryzUxDZ/CPRVCxC4uNRvbguPvBQIowD/3wT+NfTH/BDnQBqP7TnjDVpNzLpPheRQR1DSX1qcj3KxOP+BVeIlahNrz/AMiaEf3sF6f5nyT8bPEf/CafGrxlqrNu/tPXL67BzniS4kcfocVy7nEX488UWkjz2scjE+ZIAzEn7xPeic5XbXTGNkkcsneQ7TLeXVL+G1t4XmuLqRYYY0GWkdiAqj3JIH41c8VaBN4S8Q3Ol3SSx32nuYbqKSIxtBMv34yDz8rZGe+MjjBq38KNf/4RD4oeHNW+0TWyadqdvcvJDKInCrIpYBzwpIBG48DOTxmuy/bL8a6D8QPjvqOq+H9PtdPjukBvPs8hdbi4DuDIf4QxQR7ggA3bjySSeOeIqxxcaPJ7ji3fs01o/kdcaFN0HU5veTSt5W3PNzLlWzTRNlqZv/cmooWww57/AJV6ByKOhKsq+cx46ntWlYS7iWz29awy25sep/OtKybyoGHtj8adOWpNSNj2j9hnx0vw8/a4+HesyPtgs/EFl57Z6RNMqSf+OM1f0BQko5H90kda/mw8LX0ljfxzRO0csJ3I46oR0P4V/RZ8LvGq/ET4deHfEQAVfEGlWupgL0HnwpLgf99V2x1gjza/8Q6vzlH/AOuiqoZmHX8qKrlZjc/mU1KVnuGJqOwG2f8ABqKK82W57X2Sq8ha6Vv9rNPY7pMUUVjHf5mhC/T6GrFmcbqKKIfEEtieGTCdBTtTkJ06f/cP8qKK2Mep+nP/AAcA2MVt8E/gTIiKrzT6gznHU/Z7OvzXgkNqTt/iGDn6iiivPyn/AHePz/M78y/3h/L8kbGpXci+FNIXd8qi4IHv5or7q/4N67KPUviv8UmmUMy6XYID6Bp5s/yH5UUUY7/dpf11KwOteN/60PzntBiwt/8Armv8hTbluV9ulFFehHY4I/ENQ5T8KgHD4ooqJGiLK8Q/jUUZwc0UVotw6MjtTmVj/dHFXo2OFH40UVFHYzqbmvpZxn61+8n/AATp1q41/wDYY+F9xctumXQo7YN/sQu0Kf8AjkaiiivUo/B936nmYj4l8/0PbkB2D5j0ooorQ5j/2Q==)Uma imagem com céu, pessoa, exterior, água

Descrição gerada automaticamente

![Uma imagem com pessoa, parede, propriedade, homem

Descrição gerada automaticamente](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEASABIAAD/4SssRXhpZgAATU0AKgAAAAgABwALAAIAAAAmAAAIbgESAAMAAAABAAEAAAExAAIAAAAmAAAIlAEyAAIAAAAUAAAIuodpAAQAAAABAAAIzoglAAQAAAABAAARUuocAAcAAAgMAAAAYgAAIXIc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFdpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQAV2luZG93cyBQaG90byBFZGl0b3IgMTAuMC4xMDAxMS4xNjM4NAAyMDE3OjA5OjExIDExOjA3OjUzAAAGkAMAAgAAABQAABEokAQAAgAAABQAABE8kpEAAgAAAAQ5NDkAkpIAAgAAAAQ5NDkAoAEAAwAAAAEAAQAA6hwABwAACAwAAAkcAAAAABzqAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMjAxNzowOToxMSAxMTowNzozOQAyMDE3OjA5OjExIDExOjA3OjM5AAAAAAHqHAAHAAAQDAAAEWQAAAAAHOoAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYBAwADAAAAAQAGAAABGgAFAAAAAQAAIcABGwAFAAAAAQAAIcgBKAADAAAAAQACAAACAQAEAAAAAQAAIdACAgAEAAAAAQAACVMAAAAAAAAAYAAAAAEAAABgAAAAAf/Y/9sAQwAIBgYHBgUIBwcHCQkICgwUDQwLCwwZEhMPFB0aHx4dGhwcICQuJyAiLCMcHCg3KSwwMTQ0NB8nOT04MjwuMzQy/9sAQwEJCQkMCwwYDQ0YMiEcITIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIy/8AAEQgAeAB4AwEhAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A6XNKDVCFpQaAHZpc0ALRuHrQAoYHvTqAFooAWlpAFFMChmlzQA4GlzQBBd30FlEZJnwB0AGSfwrDn8aabApMkvlt2UqWY/lx+tJuw0rnP3/xHdwY7CNV/wCmjYz+A7frWE/ibUrhz5l3Muffj/CsJTbNowS3JI/EWo2r70vHcA9HNdv4W8YRaw32S4Xy7kdCejf/AF6dOTuKcVY6wGlrcxFpaQBRTAz80oNAC5pc0AYOuxN5TyhwMDPI9K8dvSLq4k8xjuLHBB6VlNmkFdEaWZ24EzMPQAmpd72owBKfqOPyrO9zXlshPNV/mMpTPRAataXfvYXqzxudyNld3emhNHtmhasmsaalyilGztdTzg49fxrUFbo5wpc0wFopAZW+k8ygB4kp++gDiPG2pusKWcTfvLhuB6IOMn8c/gK44afEpAYbj3JrnqyszqoRua1lp8Z6Lj8K1Ro8EgBZcnHpXPqdlkipdeG4SpIX6YFc1faa9vN8y8Do1XGTTszKpBNXR33w+vCIZLNsgkb1z0Iru67IvQ4Jbi0tUSLRQBhlqM1IDgakGcUwPL/FNwX8ZyRnpCqoo+o3f1pIV8wg+tclbc7cPsbFrGVPJ4rXgx684rNHS2Tsp5rMvbaORcOoJ+lJ7k9DX8G2kI04ybBvimZVYemB/jXVV3x+E82XxMKdVEhRQBh0ZqQFqVTTA8w8SIg8a6nIeFRYiT9Y1rMGrzJ/qLfKjoWrmqK8jqpNqOhesvEEsrhJFVTnoK6GO72xF19OKyaszpi7oz38SX6uFSFGHv1q1DqrXLBbiExZ6HtQ9RXaOs8IoE025Udrlv5LXQ12x+FHnz+Jiilpki0UwMKikAtSJgkfWgDyd5bjUZLy7uR/pE7KHGMYwMAflisyTTp2Yr55h5/uE1yuSvqdig7WQ9dJkSRXWYtjuVxk13MVrnRl4w5FZzkmzaEWlqcrqGnXsd4DbzRjn5Q+Rkfl1rX0+1u1IFxscYGdhptx5RWlza7Hc+GdyxXibcRiYMrepKjP9Pzrerrh8KOGorSYtLVkC0UhGBmlzQMM1Ip5FAHmBQ219cwSMDIspLn3P/6q1IQkgGcVwz3PSp2aKt3IouQi4wOtdHakHT1AIIXqc1BoKkUU4KuoPsRUvkRwJ8oAHsKFsJmp4d80G5Y/6piMD3xit7Nd1K/Ijzq1udi5pwqzMWimBzoalzSAcKkFMRx3jLTra1C6lEpSaaQJJg8HjOcevFYljdFl68Vy1lZnbh5XRX1RWcb7eUByMEUtj9vS1MX2lkbPBwDWStY3bdzp7ORXiDGXMv8AFnirE1xtU5PGKnrYcnpc66wtVsrVYgST1Ynuat5r0ErKx5knd3FBp2aYhc0UAc0DTwaQEi0/dgUxGJ4qtzeeH7hV5eMCVfw6/pmvOLZyV25xk1hWR0UGTf6ZG+FaHHYkGtKH+0fK+/bH0PH+FYWTO+nHTUuRLfn55fIGP7mckVqWYe51S0gHzfOpb6Dk/oKUUnNWMqvuxZ32aXNd55ooNOzQAuaKBnMg1IDSAfupC9MQzOTg8g9q8bll8pyqnGDxWVTWxrTdi9bE3WMNhqu21jffaNwddvpmufRHZFt6o0pLl4EKlhkdcmup8IW4lSbUHzk/u4wew6k/jx+XvVUV71zOvJ8tjqhTq6ziFpaBi0UCOaFPpDGl8UwyUAV7vUIrO3eR5UVwhZVZgCxA7V5LcR5rOo9Ua01oyKG5ltpAece1acOuycrzyMYArNxTNI1HHQv2omvSpmUrGP4T3/8ArV6V4WwNNdR2kP8AIUqX8Sw6v8O5u0tdRyDqWgBaKAObFKaQyvLIqjkgVlX1+6RyCEfMqk5NIDkNQDfaJC53uPl3sOT61lkc4rlbuzsirJEfkZbpWtZ26gDA5olLQqMdTat4goz3q/FLdRgvaTmKVeVPY+xHcVipcsrmko80bHRaP4k+2R7LuIRzr98Kc49/pkGt+KaOVcxuG+leindHmtWdiUUtMQtFAHLvMkfU8+gqtJds3AOBSGVm5PNUJlBd1J4bIpAYt/blpySPvAH/AD+NY8sRVjXI9JM7o6xQIvIOOK1LTqABUSNIo2I0JAFWlAiUsegFZlMjscm4tpQvLrI7fRiMfqK3I3lgfKSHGcgelejHZHmzfvM1YNVIA80ZH61ow3UM4GxufQ1VyCxRTA4ljtkBOeaY6jqTxmkMYMM521XmQB93qcUgIZIEnXdj5l6jvWZcabvViB9K5aytK52UHeNirb6c5ypHIq7b2RSQA1i2dCNqGBVXJptwN5RMDYT8+T/COtEFeSQpu0Wye1jBLS4xnAUEdFHT/PvV4YPTqOua9FHmXEDYbFTBscgkEe9AGla37rgSHcnr3FFMR//ZAP/hMehodHRwOi8vbnMuYWRvYmUuY29tL3hhcC8xLjAvADw/eHBhY2tldCBiZWdpbj0n77u/JyBpZD0nVzVNME1wQ2VoaUh6cmVTek5UY3prYzlkJz8+DQo8eDp4bXBtZXRhIHhtbG5zOng9ImFkb2JlOm5zOm1ldGEvIj48cmRmOlJERiB4bWxuczpyZGY9Imh0dHA6Ly93d3cudzMub3JnLzE5OTkvMDIvMjItcmRmLXN5bnRheC1ucyMiPjxyZGY6RGVzY3JpcHRpb24gcmRmOmFib3V0PSJ1dWlkOmZhZjViZGQ1LWJhM2QtMTFkYS1hZDMxLWQzM2Q3NTE4MmYxYiIgeG1sbnM6eG1wPSJodHRwOi8vbnMuYWRvYmUuY29tL3hhcC8xLjAvIj48eG1wOkNyZWF0ZURhdGU+MjAxNy0wOS0xMVQxMTowNzozOS45NDk8L3htcDpDcmVhdGVEYXRlPjx4bXA6Q3JlYXRvclRvb2w+V2luZG93cyBQaG90byBFZGl0b3IgMTAuMC4xMDAxMS4xNjM4NDwveG1wOkNyZWF0b3JUb29sPjwvcmRmOkRlc2NyaXB0aW9uPjwvcmRmOlJERj48L3g6eG1wbWV0YT4NCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAIBAQIBAQICAgICAgICAwUDAwMDAwYEBAMFBwYHBwcGBwcICQsJCAgKCAcHCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAQICAgMDAwYDAwYMCAcIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAARCAC0ALQDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwD6WVv/ANVOQ4OPx61XD9OalD5NdBmTq21RUg/+twarRuB68VIrZ560ATq/PWpARVdTzUgOAOetAE6v/Lqaejbv5ZquJOacsgUf54oAs7uRUinn9KqLLnOGU9+Kd9sSMlWYLt60AWg+D29frUgPHX6V518RP2lPBfwxvHt9W8QWEF1CN0lssokmXHOCi5b9K8y1T/gpX4CsFkaOa4uYhysm3yVI+jEN+YFY1MRShpKSNIUak/hTPpRTgcNzTlOD7V8x+Hf+CmPgPV7xYVlvB6nzYXXr1AD7j+Vew/Dn9oLw78T4EfS7xJC2Mq7KrL+AJ/XFTTxVKbtGSKlh6kVeSZ3w5P604N096gSQMo+bcvX6ipFbPeugxJKkU8VXU88Hrwak3fNQBJn/ABp27J+X/wDXUQPC1IvHX9KkB6inBvao1PNO3fN79Ke4EijcOtFRs+D6UUwOC8zinJL83Ppziq6tj/8AXTg3NAFlZPm/lUgaq6tinJJtH9cUAWkkyKeJTkZ7VWRunpTjLtGaAIfEPiyx8JaZPeahOlvb267mdsn1wABkknHQAk189/E79vT+z9cktNHsXstPtZPKnvrqETXErDBKQQ7wvf77k8gr5ZIbb3fx20y81NobyKKS6sbWNzJGoLNG3ysr7Byy4Ug7QWG7hSMivz0/bb8b3mg+GYbaNmgkupXeO8hdZFKsx3rleDhgcMfmAYjAzxy163KtDooUVJ6nv3jz/grD4L8O27w/ZfGGuahyrK95DYqSO2bdyyjjumfr0r53+J//AAVT8V+PY5LPS9Ri8O6ZNlfKtruRZADgcyOd7fgy9TkGvkXxV4Gk8QRedYyutyVLFAciUd8evfkZx39az9F8LeIbZljgkvGlHG1LswSAc8EZ5GfoK82piHNfFY9Cnh1B/Bf8T2F/iTrWquzQ3UMscjFnMEYbJOed28bmLdzzn1qxo3i0b2h1G1mSWPhhPC+7bnGQB1564JFeZaX4E1wXW6TcszAkZAznuAykj8Bz/XqLbxLq2h2KrdSR6lDt5ivzOznkcxv5e8H23dB2HFedKktkz1I1LK7R6BfXun6iyq0H2eRRhntuGXrgkNnAPHU/1qt4Z+PfiT4Wayt5pepSSNanGyVDHcW3AOcoTwB1x69PXza71C61mbOkyTPbDDCEyy74fUZ/iGc4yoA98ZqDUINSt7USNfxzquDsmHmyLj0+8Dj2J464qqdOz1M6km17qP2J/wCCfv7dkf7S3hyPSdb22niS1jBBY4F+oB+ZT0LYBPHUAnqGA+nI5On0/Wvw9/Y/+Pk3wd8aWOuNLcSR2c6+dHaoF3ICCyhc4Pfg4/Cv2R+Cfxg0X41+ALLXvD+pW+qafdLjzIwVaJx96ORD8yOO6sMjI7EGvfwdZzXLLdHg4qkoyvHZnaqwVacre+KrrIW5qRG34/Suw5SZWxUgfj3+tV1bctO3fL9DyKQE+/Ipd1Q7/l604Pg/T2pgTAk9NtFR+Zg96KVwPOVuMH8qcbpQO1ZMl/gdenao2v8AJpcwG6t6uP61Il2GB/oa51dRx/F+tTw6j7857UcwHQR3AZqc0mec/d557Vk29/096lju1uOv+r/9DP8AhQBz3xJ12306zkZ2kXbEWVs/M5xgbR+I+Y8LkYyxVT+Vv7e/xdh+I3j+402zh8ySxlaJrguXmnlHysGP3cKQVAAHQ55r7e/bm+Ng+E/wp8ReJGmZNSvidG0ZVb/j1cofNuRz8rBHwD2ZV4+Y1+evwl8EpJp0msXixtcXX+pTaSsEY4A+p6n/ACa8jMqyhHU9bK8O6kjzOz8K6xCWVrcSRSHeVAKlW7EY+6QQORXb+H/h9rGumNbhpZIcYCmRg2PfJIbjHYfh0rvbPTV+2tgLj1Irv/BuiR3Plq0Ksc5+UV8vXx0nsj7bC5VBK7ueXad+zeuqW7KVkV15wX2D26GuX1v9jaa/muJFUq3Byx3hvqa+0vCvgO1MkbtB8pHzcjCd+RXWWng21fd/oOYz04HPvUQxVZapnVPLcM9JRPzrl+Bvijwpat9lu5kjXgvEgDDtzx+vWsC58Dajd749QkuHueqtIDtk/mc+nOOmOwr9JdZ+EVneDzEtXX1JAyOOv+eteQfF39n+HVLKbyIVjfnBC/LmtI5jOL95HJWyenJe4z4y0jUb/S9Qhgb7QsaEqOd6n8evbvX6Pf8ABHn4g/Ztf12ye4kW11G3hjaF2wEuIydjY/2o2YDv8hGcbQvw14p+Hlx4a1Zo7nzducHflsf8C/qa9x/YX+IeofCnx5p+oSRGXRL6dYLjDEqDu4J/3cAg9jtweSB72DxScoyifK47BygnCR+vStu/GnK2CaqafMLizikVtysgbJ71YTk/yr6E+eJQ/Y/WnBtufSo1bj9aerZPt2oAeh4H8sdKerYH1qJOcYpwyGxSvYCQuTRTR/u0Uctw1PFTckr/APXqPzyzdvxqEtlf64pIzz0496zb6ATiT8KmSVsVWX/Ip4+/+NAGjBMT8uV5q28uYWC8sw2gkZrNtn+b29a0ITlR7c1WoH51/wDBZfxcz+NfB/hVGCxxwT6lMQx3fvXQKpHTgRA555J5HSvKPBt4reGLONMhQoXj2rrf+Cy32hv2u9DRoykcvhi18pg3L/6VeZGO2Djnvn2rifBOkTQWtnCVY7BubFfOZx5n1GQ2vc67R9JElxz9xhzjrXoXha2uIJ/LTamBtGOvbH+OK5/wxpy+dGzMq+ozXoek21tuWXzod3U4YcjGMV81y3ep9vTqJI63wrbN/qyJFaQguyrwcetdto9r9mt2Zm2rvAHy5BJPtk9T7V5/pmtpZorwyeYGbPy+nSuy8PeJMx4kkHl8GtItJ2HUbtdG9JBIgXbjjlsDrWJ4gtY72PDx7SAcACt2HU7HUGWZriLzFwPvYwcf4VV1JYpEZlZWRu+elFanfYwp1LaHi/xH+FNjrG2aa0jZnjKTJ1B47H2Peui/4Jx/BjR/GsnjbQdQjdrjT5be8hcMVKo5dSF/74Hrj61e8TQMsjL/AAsOPaun/wCCYKNJ8SviF5kYVrSC1UEE5xJJOfT/AKZ/54r0sh1rcrPB4kVqXMu6Pr/w9pR0TRbaz3b/ALPGse7puwMdK0F+Xn+VRr/n61IvI5r7Tc+EHJyP6U4PTR1/kKkjT1qgHJ9zFCdc0KpxTsZPeluA7Le1FC/L7fSii4HhROB680jNinH5k47Ggcnn0/OstwBW3Dj1p6jaKRFzj3PWnA8+vrQogTW0mDWhbSZxWbEdz/j+VaGnx+bdRpyu9gpOOlVETPzp/wCCuNiNa/bi8B2e1X3+Fbd2ABJ2/bdQJz+CGvC/iL8TJ/DLtpmlQeZcZG9s9uML7e9dj8Rvj5cftgftP6X4wmtre1h03SbmyjhhUjyIopGZA5JO5s3Wd3GfQYwPOPiVp8h8QXUtvDJJMxIQIm4e3+c189jqsKk79D6rL6FSlDklozB1TV/F19bySPfLCGGBGr8AHtn/APXV7wT8WdY0C+K3txI28bHUyH5u3WuV1fQPHV0sLaXprzrIxGyWRQzehO5hHznoBkY71JqPwg8WWUdrJcabJHcTSsJIo3VvIjGNrsQ5U5y2duCNvQ54x9jFwvLlOuNZxqWgpfO9j66+DnxMOp6Uieb5n8I55Hf8frXo+seI3tNAuFWRlkZSdynHJ6fyr52/Y10e8h8VfYL/AO6OEz78V9T/ABm8FtpnhONbeNWmdQAPT614FT3Zu2p9PSqc1NdLnzD4x8U+Irw/u79rYhdvl+aWzk5IP1PJ/wAckv8AAOv/ABEsYg0OoQ3Cs+4q8zEnv3/Lr/hXJ/HnSfE3hTU5obXT76ZoYDcs0MD4m5OI0kKlS5xnaoY4I6E4rn/g38bNc1W4uLb/AIRvUo10+2ee7kW9kFwqq4X7k6mMsdy4UBSQrYIr0KeFqzp88UrHmYjE0Y1VCbd2fVXw1+Kt+bhbDxBDJCrttDuM+Wx77h/D6g19Kf8ABPGz+w/Fn4qRj+GLRyAo7MLx+fcbhzXyv8JNUj8dW6tJJ5se4EFozGzDsSjcq3Yg9CDgkYJ+pf2Mtbt/CP7Q3iLTJo5Fl8TaXp627DG0yQLeOwOeSTGrHI6bffNdGTzjHEJvToednlGbw7Udba/I+r0+Y1IFxTUHI/zipAM19j6Hw45eVqTbxio1+7yOcVIDxn8aBjhx1pwHH40Id1BHH/1qYA3B70U4Ekd6KCbngqlT7++KdnP4fpVcy5H07U5ZOayKLG7jApVbA+tQFvyoL8n0p7AWo23N+NaGmzmO8hZeWV1I5+lZkL7h1B/rV20m8uZGXqrbvy5qkTI/J/wX4ds/Cvxa8SWOmwxjSdNSWOGX+KffPlT9Cqg47AgV2lj4BtfElvIroQ0w+Zhw1Ufi34Uh+EPx/vvD7fu7iO4ubUk9ZogC8EhPYtGkROO7VueCdciCqpYqrcZNfC43mT13uz9IwPJOV1s0vyM2D4DzWs+201bUoFH8KFOB7FlNW9Y+GEfh6w8y4muLiToXlk3MT7/4CvT9Dmg8pm4Y9z/n6Vwvxq8SrFJDBCys0kgRQO5rglUnax7DpwWnQ1PgDo0Nl4zikVVDN8vT7tfRXj7T11C3to2+XIytfOvwB1GG11z/AEiSNbq3Jxzz/ngV9Ha4GuNEjuPtUc0e1ZFyQcAjofcVlyvkaLVrpnlfjn4RXHi2Bza3s1rLGcbSPMib/eQ8H+fvWT4V+GuvaTJ5U9ro90u3AlUsrEeuxgQPwNeoaBq6pqO2f5W4YY/iHauuXTbW6gD7I/XIrSjKVrIKkYLc4HQvh4ttGs1xHH5yjqgwAPavRv2Xo9LtP2kFurzd/aU2gNZWJJzGpabe5wejFYiue4cjvWTr7R6bBt+6Mdz1q5+z14In8RfG+x1RW8u301FO3OdwXMm7/vt1X8fauzLeeOIjy66r8zx80jB4eak7Kz/L9XZH1opx3A9qenzcdz71WjkyOOlSLKMrk81+gbn5oWA/FSK2KgWTCcfj3p6ScDFILky4wBTup+lR7+f96nA4NPcCRXwvX9KKjyp9vwoqRcqPnuO53Dg+9Sebk+1Zsc4/SrAnyKksuLLx7CnI24//AF6qCX+dWYOO3WmhMuQnK1aj5HTqMVVtjtP4VaDqneriRI+a/wBu/wDY903x9aal8ULHU7zS9c8K6W99c2iQrNb6slqpkGeQySGNWTcNwKhBt4zXxpoXik2OrPGZMrG2F5+9X6qeJtHt/F3hvUdHuv8Aj11e1lsZgADlJUaNuvHRj1r8a7OW60y/ht7vf9qtQIZgwwwdflYEfUGvDzjDRaUoo+iyPGSU3Fvtb0PpXwh4pa6t9oz83OR3Fc78bvD97Lo66jYMslxbyLMFz94D/JrmtH+Ii6No8bbPMdx0X6VZPxDu/EVq6LMYf3ZACkZDf/Wr5RRne6Wh9xGvT5bN6s8duPif4kfx209pGsMceNySBo5iR1+YMVNe7T/Gfx4nhLT5dPis5mGC0c25uPopGPrn8DWRpPg3TJ7jy7rUNJgluGDM9zIoGT1+leh6d4Uh0q4Zm1TSlsJVVo2+0pguBgFCD39elb1JU2k0hUaddX3aZ6p8ORqHjTSI9SvNkNw8SqIEbITH/wCuu00TV5rS2ZbgFdrEEE56dDXkfh661DwIyyWd4txbyx7nAO7D46hunp2rsNB+IC+IY41mj23EkQc46Akcg89RXDL3dVsdPtFL3Xozota8Rm5gdZJOOvJ4XHevof8AZj+FF74B0GbUNU+zrqGqqrRxRMXNtCQGCs2AN543AZA2jBPNfI180nivxNp+h20ixy65f22lqQfmTz5kiLD/AHQ5P4V+gUZjjXbGoVFGFH90dq+nyDCpp15brY+L4jxsk1Qjs1r95cWTJ78U5H2iq2/PepQ+RxX058noWFfB/kakWTb/AL1VVk471Ij4oQeRaDn8akEvzVVWTC/XpTt5z25NGwalktmioN4HX+dFBR82pKxPUZqeJ8jt0xWdE/zc8+1WoZeRWMQL0T8/41et22isuBssPbrV6OTy/StEiXrsaEUmMdqJbrZxVE3fFQzXmD36VoRqXZr/AACc1+WH7b/w8uPhj+1F4mtoYzDZatcf2zZt/wA9Y7jLvj6Tecn/AADPev04uLncTjPvXx3/AMFYLGIab4F1ARx/aoZL+HzMfMUxbNt9xnJx7n1rix0FKk2+h25fJxrKx81+G51mjh83uNgHf8KZr/wftpbrzY9Z1SDzRuKRT7FPtXFXHiqSz8mSN/fKnr7111hrP/CTRLtkDSKAMg9Ca+TlCpB3ifcYatTlpLU1PBfwR0vUZTG/iDULO4wR+/KyRn/x3rXfWn7OUMdgsLeKEkULu3QRosjKew4P6V5nfXeqaVa7WtpJsA7Sq5YnqBx71ofCXxprlzqKxTRTrIuSvnKSAAeP8KT52uZ2PoqObUIWhyO5654T/Zqjspmmk8TeKLe2mZVES3SjknAOAvT65ru/Cvh9fCd/cRefJNHa8I0jZZu2TWFpnjK4srCOa4Zs4yc/wVFD8SYbwXVwzhdgOHJG0Af5B+hrzZSnUkceKr0/iWh6/wDsfeGZPHH7S2k3RjZrXw+lxqc/ou1GhjGfUySxsB6IfevucHJrwr9g74UN4D+D0evahbtDrPjLZqEquMPBa4Jto8dvkcykHkNMVP3Rj3GM+hr77L8P7Ggovfc/M8xxPt67mttkTo+f505XPbp0qEHP9KkU5P8AKuyxwk6Of7xGalWTB/nzVdeVqROR60ATCT9OvFPEnFQKcf1NSDr6c5+tBWqJfNoqJ8E85/A0UBys+aox/n0qxDgFearq24/7NTwBs1noUWIpMD1+lTm52rVXcFXn8arXV35f8qpOwi+958uVP61BJe89ay5r/H8VV5tU45ajmCxsGfec9c18i/8ABV2+26X4Hth99/7RlbnoB9kA/ma+mNW8Zaf4ZsGutT1Cy021XOZrudIY/wDvpiBXxH/wUE+LOl/FP4kaX/YuoW+qabp+lrGtxAd0TSvLIz7W6MNvk/MMgkdeK48fUSotHfl9NyrpnyXq0smlzNs3NbSEkrnmI+o9vaui8BeMV067hzMFjyCcDpj19qpazppYM38Knp3rmNS0qXT1zD86SDJGcYryIpVI2Z6suejPmR9deC/G+m6zpaCTytqghXzjJrvdB8X6PYaW80kdtNPbxtsB/iUcgA9jx+tfDWn/ABGvtNgWHy5mWPnBQ/ga6TQvjNqM9vNHFHLPJIAp2Rs+zvxjucVxzy+S+F6HpUs4hs1qfUXivx1b3cU10rRQpFgsvVGGPmGfUZB98GsL4Y6XN451/wC3TRmPSIZRLbxgbftODnLd/LyFwP4tv93hvOvh34O1jxrCP7WW4tbGTJ8h/vzAnOCP4Rn8cDtmvozwTpS2sHRVEmBhV2genFedWkqD5YvU76PNX9+S0P0k8EIIfBejoOdlhbqOPSJRWsoAGPpmsH4Z366t8OPDt0rBluNLtZNwORzChPPsa3h0r9Cjqj83qXUmPUfj/Sn4ww9uaYOGqQDjiqJQ9BUiDNRjgVJGCq1JT2HxnnpTwcio0BA+tSKvSmApO0/dzRSk5NFPlQHzTEMn9KtRISPSoIBip1YLWOhVxJ3+U9l+lZ1431PanarrMOnj95J8w4CL8zVyeteOpgG+z2rdfvMCf5d6UmOKNS/uVgidiwVV5Yk9B9a8x+Knx0t/CXhzULy2y32GNnaQrncR0VR/ExOAB3JxVjxfqtxPptw0xuG3bRhs7Vyw7dvxrznxjZtN4O1YJj93HI6scfIy8hvzFQ/IuO54r8YLzUPEGpR2viiG01bVIoFn1Ce4iWdUlYt/o8IcEJGuPvKAxUIScs1eX+JZXubwnGAoCjjgAen0r2b436Wo8Y3sif8ALwI5sY/hK7Rz3Hy9a8j1nTXUlseufrXyeJrSlXlF9D7TB4eMcPGUequzAeFZlKnrjmsa60DzWP8AsnI+ldFGm0ndjdnoe9SNYLLcKfut2HpRCs4mk6Cmih4Q8MR3Fwqn5SowMjtXqvhHwhHYbfLVZP4hu6Ke9c34c0YecrbQC2Oc9a9P8JaWAF7/AErlxOIlJ2OzD4SEVc2/Cvhv995hX5FX5Tnoa7rSgLeBV/u9/WsvRLKNIBzyozWvCnnOqqGxnHTqK8epJydz04wUUdBY/Hjx18E7S317wzJdaxpcC51HQGKs08Y6yW+7jzAM5jON45Uqww/07+zn+274R/aH8IQapptwoRzslC5zBJ0KOh+dGHoRmvmvw1AHiWM7dqjkMOK8/a9m+FXjLXNa0mKNbbw7erJexwqVNzp0xgMoY9GdJbl5E/2YZUAyxNfUZDmVSUvYT2Wx8ln+V04x+sQWvU/TqyvIb+2WaCRZoWGVdGyDVjG3j+VfMXhz4nah4USCW3muDBvw+0gbUP3WI7jAHJHcHpXrXgv462utJEtw0U6yDHnQkAjHXK57dDg8elfWqavqfH8vY9GQc8D3qQDp06YFVdN1O31SLdBMsqjrtPI+o6j8atqMf/WrSOuxPqOAzj374qQLg9qahyeKcBhv60kg5iREyO1FGcf/AKqKNQufLWpeILfRYN0zbmP3UHUmuc1bx7PcnYq+XGePlPJrL1SQyyrL5kkjKTuBQkg/57iprhTNZM0KpIjLg5AO0+uMde1c+rNtEZ8+ob2+Zm27sEbtgx/Xr1z+VV7mBUMkeWkXbyM5Pofp/TmnS6cZpMswHG04foD6dD+VNvbGOG4+WWb5sd+uOuTkn2oasFzO8Q+XPpEy/M5EZMYC/NIQM4HbqP1rkopIUnkX5mt7k54XhgQCQAee549jXcajErWzDZubdgKjEEcdMc/0rjxpf9mXZhbdGtuQcE/MY2LFGI6cAFffYcjpRZhc8x+Kfhxj9huGVvMaF7WQkY2mNiyA/VX+vymvM/FXhXybBmK9eSK+nNY8Nw+LLCSNWZ5rggnK8JIv+rf1AOWQkDpID0HHn3izwDus2PltuXPy46Yr5HN6bpYj2nSR9pktdVcP7PrE+bNX0doTuA6cU6ztDcRq3O4V6d4u+GcsNmWEZ+gFc74X8JvPP5DKx5xyK8/214nsRo63KfhzcjKvX6ivRPBsDTSL1xWXb+BJYZOI8d84rtfA/hR/tSq3pnkVy1ql1odtONlY6fSbAvGuM8DFdJpOjsqjj5v5Va8PeF/MjHHDYzntXVW2l29imWxuHf09K41rqy6nY5nUbtfDWmy3EnRAx4rz210y48a/sx60fMmjvvGGpT2MDgfM3+kSJuHrgRx4x2IruvFZt/E/iu10GRZPss0c1xcFGKsyxoWCjHPzPsTjB+fqDWxaaJ/bvja0srVYXsPCcHkoq4WJrkp8+wAdFXCj2A9DX1PD+Hetbo9D5PiLE6Kh13O48PWUetaEYtQtbW4h+VQk6iR2HAHLc9yM5HepLXw/a6VGkNpDDDHCMowjAJXsOmc+5qxo1gAn2dVEKMpdd3GOMAZ546n64q4qpbTL+8bY/AyeGPPGMD+WP0r62x8abXh7xld6dtdbjZcRAYBYq2fTjJ/Ou+8M/tAHdHFeR+fuxgqpDdcenP5V5OxNu6swZUbqTkNweOmCf5Ves5maZf8Ann/d+VVA/n+NGq2K6H0b4e8Zaf4k/wCPWZfMxgxt8rf/AF/wrZXntXzHZTTWDho5riPYN5wGIz/k16N4N+MV3YgRXn+mwgDbIf8AWAfXv+NVGT6mfL2PWMbh90UVU0zVoNbsY7mCQtHIOOxH1HrRWlidT448RQK+kLJgqXJBCsdpAArL0l2js4xncrEnaQMLjHTv3oorGnubMk1+ERXVvtLKrEnaDxwM1hxq0msbWkYqgDAYHoOOnTmiilLcDWvP9Jsol4RVP8AC5+tcf42lNjd2l0uGkWaG3YNyJY5nVGU+33WGMcoOoyCUUdSepUsL6TR9YxbHy1jRsLksMdQOc9Mn/wDXzWh4j0uAzxbYwi3CF3Vemdx6UUV4+eRTwt33R7vDrf1r5Mxta0C2nsm3Ju2rxXH2vhSys9dXy49oYgkdqKK+Kk7H3dPc6q88P2qW24R/dXI/SjwpaqNTP+yeKKKylsb9D0bSoFit9yjDHPPpUdwfN+98244P+fxoopFdDmdQ1JtJg8WaxDHD9u0GyKWbsu4JuXeSR3O5VP4Cuu8JaFb+GLCO1twzLHkl5DueRjkszHuzHJJPcmiiv0DJUvqsPQ/M88k3ipX7/wCR1QjDR3BOeF38EjJJx2+gqawu2i01ZFxuwvJ5xzRRXsR3PI+yU9ZJhTzFOGkbDcD3rUis44bVcDJYKSx6n/OaKKzK6jri4fyjJuJKDIB5rf0I+fCCeGYH5gTkcUUUDexfHiC80ZmhtbmeGPO7akjKCT1PBoooqkRzM//Z)![Uma imagem com pessoa, parede, homem, interior

Descrição gerada automaticamente](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEASABIAAD/4S1GRXhpZgAATU0AKgAAAAgABwALAAIAAAAmAAAIbgESAAMAAAABAAEAAAExAAIAAAAmAAAIlAEyAAIAAAAUAAAIuodpAAQAAAABAAAIzoglAAQAAAABAAARUuocAAcAAAgMAAAAYgAAIXIc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFdpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQAV2luZG93cyBQaG90byBFZGl0b3IgMTAuMC4xMDAxMS4xNjM4NAAyMDE3OjA5OjExIDEwOjM3OjIzAAAGkAMAAgAAABQAABEokAQAAgAAABQAABE8kpEAAgAAAAQyMzcAkpIAAgAAAAQyMzcAoAEAAwAAAAEAAQAA6hwABwAACAwAAAkcAAAAABzqAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMjAxNzowOToxMSAxMDozNzowOQAyMDE3OjA5OjExIDEwOjM3OjA5AAAAAAHqHAAHAAAQDAAAEWQAAAAAHOoAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYBAwADAAAAAQAGAAABGgAFAAAAAQAAIcABGwAFAAAAAQAAIcgBKAADAAAAAQACAAACAQAEAAAAAQAAIdACAgAEAAAAAQAAC20AAAAAAAAAYAAAAAEAAABgAAAAAf/Y/9sAQwAIBgYHBgUIBwcHCQkICgwUDQwLCwwZEhMPFB0aHx4dGhwcICQuJyAiLCMcHCg3KSwwMTQ0NB8nOT04MjwuMzQy/9sAQwEJCQkMCwwYDQ0YMiEcITIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIy/8AAEQgAeAB4AwEhAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A7mlzVkhmnZoAWloAWlzQMWigQtLQAUUAGaKAKeaXNAADTgaYAzqiM7MFVRkknAArgNY+Lej2Tyw6fby30yEgMCEjJ9c8kj8KlsZw138UPE93IzRXkdrH2jghX88sCf1pyfFDxOuA9/E+O5t05/IClcdjrfDnxVFzcpbaxHGofCieIEAH3B7e4r01JFkRXRgysMqQcgihO4mh1LmqELRmgAzRQBSzS0CFo3YGTQM8k+I/jb7X5mhac7LCCVuZOm//AGR7dc+v8/LXUA5BqGygWRs56+1SLFIxO1ScHINFxpDgskTZ2svpxXpHgPx9LYvBpWoSbrZm2xux5j9vpST1Bo9lRwyginZrQgWigAzRQBTpaAAVT1aRo9KuXUkMIzjBx2oBHzLdSGa6dlABZjwBWrpWgNeOpnJVP51hUnyo3pw52dfb+E9O8vCpz6mtnS/DtlZ7nMasW9R0rl9pJnZ7OK2LVxo2nzqVa2jPviud1bwdaywtJaDy5l5UA8H2pRm4sJwUkdZ8MtZub2zutOu5GeSzKhN/UKc8fgR+td9XoLVXPNas7C0VQhaKAKO6nA0CFrL8SsyeGNTdG2sttIQfT5TQxo+fNIto3ud0gyR0FdhbDDBV/CuCu9T0MOvdOitYyEGTitFflArFI3Y8BCOWAqs7Rliqupx6GhrqK5n+C1kt/H93CpwhhJbHccEfrXqlejTfuI8yrpNhRWhmLRQBlbjT1egCVTVHXLRr/Qr60T700DoPqRQM+ftJUw3M5lBXyhhgex7/AMquS69Kh/0WIADoz8VyThzS1OuE+WGg+DxbqMbgSeSy57Gurg8QW0tn5z3kEZUfdaQA1E6dtjWnVv8AEcve313qM5IuJ/KY5UKdi4+p7fhUsCtbgBVBJ6SC5zz+AqtErE6ydzf8Ma9JpnjWBby1Dm7g8nzI5CdvOdxGOemPxzXsgrpp25VY5Kl+Z3FpaszCigZj5pQaBEqtTpJUiiaSRwiICWYnAA9aAPAvEhs5dQvX0xiFkuC84XIG0k9M/nWOyOkuI0VTjgkVjJq50RTJ47eSaEGWUeYD90Dt+Fanh3wtaa2bw3EskbAlItnY46n15qHPl2NY0+a3MXbnR59QtFAjzIn7uQoejrweP1+hFWdP8PtHJGJUMYRfvA8tk55rPnsrGnIm1Infy7bV4L+3iW5W0UKh4KmQt+IOMD6EjvXtEbM0SM67WKgkehrai3sc9eKSUu5JmkzW5zC0UAYmaXdSAkVqjvrYX2n3FozbRPE0Zb0yMZpgtGeGR2zW95cWN0oLoCkgznkHBH86tpZ7gG/cuB3Zip/Hg/0rik7bnoxV3dCXKvHEwiMQbHVEzt/En+ldB4TjW12JnqOST69zUNprQ0Saepp3WnIb55VXDSAb9rld2OmSDTjawCHbNbCQH/noxf8Anmp5mh8kXqXtJhS61m0i2Dy0+YrjgbeR/Ku8zXVh17tzixL95IXNLmug5gzRSAw80ZoAkU1KDVCPOvHGgyxakdXtYWeOVczbFzsIGCT7Ec59Qa5CMl5ACx21x1Y2Z30J3SNd4UawkBIXK4FZmmR363LSLIxjGB92sY2tqbzvdWO20+FrYM1w0ju5zlug9hVuYq0ZIP61MikzS8JW4a4ubok/LiNR+p/pXWA13UVaCPOru82LmjNamIZooAxKM0gDcaVp1ijaSRgqKMkntTuI4XW/G7XtzJpWnxqIpEKyzOMkJ3OP0/GuFScCQ7CSu4gZ7jOKwqanRSfKy1JdSG3ZkAZ1OCCe1OsDfTnf9tjj9ixGPyrnsrHfSu5G7BHdRunkakSzdQEyv45rVe5McDLI4MgXlsYzUO2yKqaO5my32r6QG1GxmWWHCySwrw8a46kdx7/pxXpPh/Vxq+mxTnG5lBOK74KyseVN3lc180ZqyAooAxaDSAYzYrB8UXBXSpFBwNrMfwFDBbnnulac1tFePMQ1wx2E9gMA4H5/pWKQYzIn8SOcfjzWMzanuJb3RMxUn73XNbFtZCVgd4C98Hk1jPRnTSd0dNZ2tlbxAxysT3BPeobcfbdSY9YY/vHsT2H+NZLuayd9Bngu/jv5ZkkO6TBVtw6iux8FWv2C08lT+7Msmwei5OB+WK9BHms7GimSFFMDFpjNikBWlkwMk4rnr68ivLk2zMCnKkfWk2NHPhxGz2k4xPHgHP8AGOze+RWPqmmOJGuohkH76j+dRJaGkHZmLLbHh1P4irNk9ypEaqrZ6ZYisW01qbpNS0N6z028PM1wIkb+GMZJ/E9PyroYY47K02INoAyc9TWMmnsbRT6nGeCPOTVbqeP+GMqB6sTx/KvYrCI2tvBEOqgc5ruR57OhBBGQcilqiQooAwJJVjHzHGaqSXWThRj3NJsaKUn777xJrnNetZAguYMrIhxnrke9ILmX9ttdWjjiu2NveRcJKB+h9RVuGzuE/dmSOQHo2aQzO1LSJbVGmMJEefmxyB71StYiJFZexrnmrM7KUuZHTWzZALCqer37GNoLdWeVgQFQZNZJXdjVuyuT+AdBurdJp72HywZAwDYyeOPyr0GNd3PbPFdyPNbLdtdpC5jY5yM4zyK0UkSRcowIqkIfmimBxX2h5pic8dqGz3AqBkbY3dvpTZER1KOoKt2piOO1jQijs6IWTr9Kx0N7aDEMzAL0BOf8ipsUmaw8S3VnHDHfQJcQTR87RjjoR71BJPo0s0ZtHuInbJaPHTGPX8fyqXHm3LjJx2NW2+wT4C3cig5AJHX36VrWEOnRXH2eMOwBAeVRwTjOCevT2xSjBRdxzqSkrM6CNg6hI12xL6DFSy3SwYUcueij+damIR/vFy3zE889alRpYeY5T16NzQBft9RDEJMNpPQ9jRTuBxjyeVbxzj0Ib8OR/WtJVDoJFOVYZGKQETx59eelV5VeNd2Mr3OaAGBkmXa3zetYl/pS7WKYBHOBQCM29sJpbe1KISVUg4+tQW+nol0xliywHAYdDk4NSiinFpQiwySSp/uEj+ddDYPcW9lNsO996HLjqOfSgZs2upXz/JtAzxwOlacDqvzON0hPzMepqkQy7HJngDj61IsnufwNMRJkbM8HPtiilYD/2QD/4THoaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLwA8P3hwYWNrZXQgYmVnaW49J++7vycgaWQ9J1c1TTBNcENlaGlIenJlU3pOVGN6a2M5ZCc/Pg0KPHg6eG1wbWV0YSB4bWxuczp4PSJhZG9iZTpuczptZXRhLyI+PHJkZjpSREYgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMTctMDktMTFUMTA6Mzc6MDkuMjM3PC94bXA6Q3JlYXRlRGF0ZT48eG1wOkNyZWF0b3JUb29sPldpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQ8L3htcDpDcmVhdG9yVG9vbD48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICA8P3hwYWNrZXQgZW5kPSd3Jz8+/9sAQwACAQECAQECAgICAgICAgMFAwMDAwMGBAQDBQcGBwcHBgcHCAkLCQgICggHBwoNCgoLDAwMDAcJDg8NDA4LDAwM/9sAQwECAgIDAwMGAwMGDAgHCAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwM/8AAEQgAtAC0AwEiAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A+5FcH2qQN/hUAfJx+VPDfX1616By3JkbIpw+UH1qAPzT1f5aAsWI2z/PNSKciq6yZPtUiMOPSkUTqQeM96erYJ7jpUKOAacj4FGgE+eT+dKrZ79fSofN28np161znxJ+NXg74K2EN54z8X+FfB9rcHEMuuatb6ckp9FMzqGP0zS5kVuzq04/wpytxivHfDP/AAUA+BnjTU5LPS/jF8Mbq6jUuY/+EltI9yjkspdwGx6qTXUWv7SHgC8mSODxx4PuJHQSKItbtpCyH+IBXOV96nmsDR3icr75p2eKr2l1He2iTwSLNA/3ZEO5W+hHFTb9wo5mIkQnFOBx/Ko1PPWnbtvPr+lPmvoIkV2OKdnn8aiD49aeD834dqe5LHZ4+nrThyO1R78t7d6cDgU9heo5utAcgkelIH55pN26gaQpY9j+lFJn23UUw0ONSRge1Oz0+vFQh/mpynI/GgRMJMDr9acsm8VArY/Knb8L92pHcso5z9OvvUiyZxiqsbZH1qQSetUNFpWJX9a+ef8AgoH/AMFKvBP/AAT68JWs2tRtr3irV1MmmeHrW8iguJ4hu3Tys2TFANpUPsYu/wAqqxztvft6/tx6F+xF8DNS8RXUljf+JZI/J0PRpZSrX9wx2qXxysKcu7cZVCq5YqD/AD0/Hr4l69+0T8X/ABH4y8S6lcaprniC8N1dXMxzu/hRQBjZGiBURBgIiqAABWFSpbQ1jBvU+yPj/wD8HCvxq+MlpPY+D7fw78OdNbgNp0X27U8Z73FwCgI7GOFGHOD0r4m1jxdfeNvFc2sa5ql9qusao5eTU7udp7i6kPUTPIWYsf8AaJBrkpYZLWUumVkhbkZyVxzwe/HPuKtf2otw/wA8arHMBHOg6HIyGH5ZHpjHpWHM2aI6ifWbi4uJBcvJJdQsP3RcqJlUchT1WRRjjoR0zwCWviC3WbcsbSiMGZAAAbhAMtjssqg5IHDjkc8HBvtSk1XTFdm3XNiVildesqr/AKuT/eHKk9wAeuTULSs4S8jZlkkHmfL/AMs505z/AMCAbp6/Sp6DPpX9m39vPxp+zLrdpL4P8S6rYwQZlWBZd1rfR+kkLAo2OAVZSV+8pBr9qf8Agnj/AMFGPD/7cfglUZbbR/GljDvv9LVzsmUYzPb7uWjOeVJLIQQcgB2/nISTybgrAx8st9otscbCGYFfocHj0Ir0v4AftFeIPgX8QdH8SeH9Un02/wBMlE9vNEceW38SnsVPPynII6jnFEZuHoOUFJeZ/T+Hx9cflTg+T0r5R/YM/wCCmGi/tj6Db291Db6P4ot7ZZbzTxLuDMpEcjRk/eTeUOOqiRQc/eP1Lb3AnjznPYmuqMlbQ5mnsWhJgenrT924delQK4ApQ3+fSrRJY380paod/NLvzmm9hakomwf16U7zOtQlgCc4pC+FpINyXzdhoqEyH+9t9qKoDj1baRQrc8//AKqZuNKrc0xWJlOOtKH4qNWyR/OnKQeOtSImV8gHv15rA+JXja18CeEL7VLqSZY7OFpXWJSz7QCTgAE9M9j9CeK3F4P8NeV/tlTTJ8A9dhhdoXuLSUNcBFb7KoQkzEMQp2YB2nhjhe9KW1zSnvY/B/8Ab+/aK1746/tDa3rWsRPavFcNBFA1691JbxqTtjLtgZXBGEVUzk4JJY+Hy+IFvX2uvLdHQYYH+v0Of6VY+IGsNqeu3GzfDGGCiN33sgAAwWx8x45PGTnGBgVN8PPhzfeLr1PJiYqWxkivMqVYxjzzO6nSlOXs6epitDNqk+2JC0jYyF5DY6H+f4Guk8PfAbxN4kRWt9NuCuODtx7ivrH9m79m7TtAnS51K3jnm4IDDO2vqfwr4S07ydqWscaY4ULjIr53FcRKMuSkvmfU4PhnmjzVn8kfmVafs7a5ZiaWWzuFbbh0C9Rjr+de2fB3/gnLrHxF0GO7aNrWGZARuXkjBwR7g/ofqB91x/BrR764TzLWNvM64zj8ulemeHNHs/DejQwwpGsajHHFck86rzjZaM7Y5Dh4Su9Ufm/4g/4JVa7Z2ZazbzGjJA/xHP6V5Rr/AOw7428LiSNtPk/dOxPp6dRX6+3VxHJhV2jjFYeuaFaXyyK0UbbuScda5o51iYbu50TyHCS2TR+SHwY+LXjD9kv426Xr1slxZ3+lyhhHKpCyxn5XU+qsmV/HPUCv33/Yg/bZ8Kfth/DOHVNFuFt9TtkA1PSWDNcaa54G487kbBKyD5W9mDAfBv7SP7Kmj/FzwbMtuiWesWal7O5Cj5WH8LDup6V5D/wSS8e33wW/4KDaHoeoLJYxa9FdaVcpz5bsI2lQgjkMrRjBHVWIPBNfUZRmkcSuS1mfI5xlbwr54u8T9xEfIyOnapFbPcYqGIsyfN19D2qRWIPU/lXv6s8B7kwam7qatOx9Pyp9BWHF+fpSZz+f5Uh5/pQc7vWnzBEAWx97H4UUE4PUUVJVji1m3NUivk8fzrLjvMHk/wD1qkivM/0q7mZpocZ/i47U8D5s1UiueKnR9y8VQEwdi3T5ehrwv/gpf4k1Dwn+w78Sr7TViN1HoVyC0qlhGhjIYgD+LB4PVT8w5WvcwcJ6186f8Fa9b/sP/gnZ8UDtjZrzTFs1DZ3bpZo0BUDncCQR2BGTwDWdT4WXT+JH8+fhfwgfFHiO3tmO2NpAHA7DPTNfW3wr8AWfhfTI/JjjOxQAcdTXzL4DuF07xLDHEMFnyo9fSvq/wRFL/Z8IbczMozxXxefTlZRufa8OQjdytr3O98L3DBlwW3scYHQV7B4JE01oitJs8sdvw715B4OuLfTL4NdSxxqzAn1r1/wt8Q9Ft4tq3dqdoHR1yK+TVCTdz7ONSPVnonh62laZPM+ZdvBzzW/BLucRlfmxmuW8L+OLO+n/AHc0bKeRyK0J/Ftqtx8rD1PPNdEY6WI1bub1rZvc+uWOcNUV/oU1sWZgWBXHXgV5R8S/2z/DPwkupY9QuwZIcGVI+SmckfoD+nUkA+L6r/wV5sNdnkttI0C8mOcI80gHmc9lAJz7VvDL6laN4o5a+PpUXaTPqLUEZ4+AVb7pUmvh34wa1efB39rbSNQtd1vqOnXkGq2cgHzJJHIGXgDlW27SO4JFeweGP26f7WiV9Y0K6gjYAs1uDIY/r2/PB61xv7R/hy2+KP7TfwdktJdsHii9i00yquSpa5t0XIPU/vuntXflFGpQxUYtbnk5xWpVsJKUemp+1/hG/m1TwzY3MyLHJcW6SOgIIUlQSMjjjpxWqq+1UdCsl0vSLe3j/wBXbxiNctkkAYHP0q8pyO/Br9C9D851Acd8Uq52/Sgfj0pQP8ijQkaUwMnpTj8p/wB0U4im7AWo8xgSR6/nRTxxRT5hHkgmYd6liudv/AaqbuB1NORtp+lIDUtbrt+NaFtcZrBgmrQtpsJnFOIGxHJu67uK4X9p/wCFq/G/9n3xh4Xwhl1rSbi2hD8KZSh8vJ7fPtOfbNdlby5T8KmDs3yg/Q+lW1fQmMrO5/M34J8JXen/ABntdDuoTHfabqMtlcpg5R4iysDnnhlI5weK9i8d/HiTwGf7NsbeS61Db90cLF9ffvXrH7eP7Pnh7wJ+0j8UPiH4NuryNbJ7jUrXTpLUCFrsRsLiQsWLNG8vmOqgIeRzztHxr4Vmk8eWN7rms3k15cSTmNYUbykY7QcsExn72AOnHft87jsHGclOpsj6TL8ZOEXTpbv8Da8TeKvE/iOQteavBpkbL83n3Yj3k9gAc1h2Wo6jod4slr4mUt/eS5O38/6VNaeJY9BhuZLHTbO4uIQSfk2wwf8AAVxuYcnJ4rc8IajrPxRhvIVtbHdp9q9w5ETRlgrKB824gFt3GRyVPbGCNO0dlb5I0lUi56yfN83/AJHqP7Nv7Slz4PvzDq/iTT2tZGDgy38eYx0ORuyB+FfTvi/9qT4baL4Ikv5fiJ4XN0se4w2d8t7O3XgRwlmz+H1xX58+LvC0lv4RvLq8haHZGxVZUw6kcgj/ABFexfB3/glF4q+MfwAm8U6frdnBr11afabDRpocLcoV3Khm3ARyMMYypXJAJAyw82vgsJJ+0nJxTdj2MLjsfCLo0oqTSvr2+8p+MNVX4l3za5D4Zury11N/OtrnW5/s6zggBGS3TczLtAILsgIOe9dF4D8KS6ZH5tx4y8E+HLmQnZbqsMEmeeCZC5/Q11l4ll8QvhH4S1uSGSwkXTo4b6B0ZHM8X7mZB/c2yRuvTPGOMV4z8PvgtLZ+PFkvriG40dbmO4laOPzHmRJA5QDbuDPtCk5AwWyWHBKPI7wk+W2muv56BXjUUY1YRc+az0039NfvZ7F9t8QWki6bqPiXXfsM53Ry6c9j9nmBxyrLbZ7DqAfwrk/2g7jxZ8BrPwv4u0Dxfq10+g6xFdWaalb2ty+nXIIliuEPlBGAeFcqyEE7c5GRXoHwQ+A0+s63eX2nJcaTpM0pMdhuJhf1IT+Fs9x1ya6L9rP4NLefCLQtDuZIbW48SeJdP0qO4ddxgDyF3k29wscbk+w96zo4j2eJjZ3V+yKxWFVTDPSzttdn6ef8E0P2mPEX7T/7LvhzXPGC48UNYxG/kazFm1xJl1MhiAVU3bN42qqlZFIGCM/Q/wB4elfHP/BJH4o+EB4C1P4b+F7OyRvDMa6hfajCsrT61dTMBcXdzLKWaad3KkyZ24wqhURVH2Gp45/SvrcPiIVqaq09mfFY7B1cLWdCsrSX6q/5EnT/APVSg9qYTgZFOz8orc5ByninD/63FRhs0bsUASAjHaim8Y55/CijQdzxkzZ6fhTt/HvVUS804TdaQi5HPhv8TVy2us5HH+NY4n/P0q1bzZb3xVRvfUhyOgtLgMBk8151+2R8Vda+Df7LHjzxT4dH/E60HSnu7dtiyeSFZfMlCtlSY4y7jcCuUGQRkHtba4JNV/FPhvT/AB34U1TQ9Xt/tWk63ZTadfW+cefBMjRyJntlGYZ7ZpzTcWkXSkozUmrq5+Cuq/EHXPjZ8VrXWNT1/WNRXUdSjvZrW7lBjRwJFZkXGEyzsSEwpJBIyFxnwfCNh401q1SNYo7tRqlskf3ZAcRzf98sI2P/AF3WtX4r/DHUP2Yvjnd+D75nmvPC2utavMU2fao0mDxygfwrLCY5AP7si13eoWNjrVzDb3iyDyZRLDPBM8E1u2Cu+ORCGU4JBweQSDkcV8fWxFSK5Zt9V3f9XPvY4Sm5qdFLXVdE/wCkeSWHwfvrLVcJH5TN1VkDA59j612fhf4O69Zjy7V/scLkM6WqCLefVtoGfr1r0iy8C2NmnmQ+LPF0bMOSz2EmPX5pLRn/ADYn8az/ABZYaf8AZ2hj1DxXq80gwA2t3MaN9Ut2ijb6FSK4XjYy0cvwf/APVo5fKK5ow+9r9Lnj/wAY/CsN1rFh4T+0Lcatq13Gt1GjbntrVDukdv7uQMDOMk8dK/Rb9jDePAvks3yxRBQvt0FfCvwy+HNnoHju4H2exsZcK7iKMIqKeccdzt5J5Nfcf7Ler21lMIXljS2mBUNngen61zYqpz8sY7L83/SOjCU3DnqT3dtuy/pnm3ivw7c/BD4zaxat4VvPFXgnxnePrEKWTwG80XUX4ulRJnjWSGZgku1XDK5farZNaunt4YN4Wh+HPj8yNwVGhCJiP955FT/x6vZPiz4St9SBWZo3XzA+FbkDrkHsRWTp3gy/t3iaHU3lj7K/XFZfWOk43NlhHvTnyp9LHE6XYeKtFgkk8O/Du9sI2O5H13WLG2jGe7C2kuZR/wB8Gorn4SajqXiO18VePtWs9Uu9Njkg03TNNt2t9N0vzh5cknzlpLidoyU8x9qqrMFjUnNeia7rOqadb+TMyFCQuFHWsbXdT/tiO2tWzIrXMKqi4BciRTt5z1xis/rLfu00l+f4g8Go2nVlezv5fh+p7z/wSj/Zk/4Uv4M8S+J7pt934mvGtrUk9LaF2Bb/AIG4AI7eT719cB/u+9cf8GdE/wCEX+EvhmxKeXJDpsBlGMYlZA8nH++zH8a6hZeMe1fomDoKjQjTXRfj1PzDNsbPGYypiJ/af4bL8C15nNLnHfuOlQLN1oEnHUV1HnE4bcafuwKriTmjzs/7uKALHmZH/wBaioGfn5aKAPEvN/zmlEmB3qsJM05XqRSLEcuXOVb6+lWoJOOv5mqMUmSOeO4xUqXPlnrxVRZBt2rHaMnj61Yil3fh6Vjwaj7/AIVchvc55rQTPgL/AILLfsxrqXjjw78R7ezZtK1CFdI1+SMfNBNHn7NPkdGeNmi3Hj9xCvVhXxha6xN/Z0Bkz9ot0EUhOMsV+Un05xmv298ceB9H+KXg3UPDuvafDquj6tF5N1aylgJRkMCCpDKysqsrKQysoZSCAR+Rf7d3wO8Mfs1/tDXPh/wlq1zq2izWMV44uLpLqawnd3WW2Z0VQduxGGcsBLhiSpr53NsE03Vjs/zPqsnzJOMaMt47PyPP9CurrXtRUySN5IPIzxivYfBfhmOdIxDGp4+Zu9eN+FNRjguvlwMnB9q9Q0b4kpoNgy28fmS7cA5xluMD2r5HEU3eyPu6GKXJds8t+P66t4O8XaheafClws6BdhbbyBwR/UVpfszfGDxUkafarfZtZf3isVjGfXcTj6gn+laPjm/s/E989zrWofYbZeVVMeY7Z9Pauh8D+MfAdlp1rYt/b0TxtkSbY3jmxz/eGDx9MV0RmlSUZrXuYxo1atXno7du57v8GNM8TeK/Gcmqa5qzf2XsAgs0jCKwwPmLEb2zkHrjkYFe5tYxfZdqybfMPljDEE5HY9a8D039pzwSklml5b31jDCvlxTrcrNtHTLLtB6ehP8AKvQ/DfjzT9Xtov7H1y0vGnVWjLHOCMAnGc4OPwzXHUjfY6pOrSX71Gz4qtGijX5n/djaCzF+AMDJOST7nmsb4W+Ar/4mfGPQ9CspIrdrid3kuJQWW3iSN3Z8AfMwAwF4BJGSo5F3xL4gaXSFmkCwNt/eLnhT9fx61k/s8ftD6L8D/wBohLrWiriTSJUi/ehfJMkkeWPHdUYD8ea0ymgq2KjCe19fkefnGMlSwkpw36H6OxhYI1WMfIg2qCckAcc1Kr7h/nmuN+HPxr8O/FG0jk0fUoZ2kGRGWG48dvX8K6xHyfbNfpaaex+W+pa8z5uelG/+LpVdWyfSnF/emSTCQk0CTI9ahMmO9AfC/wC7QBMWFFQmXafvUUAeK7sinA/X3qPcQ1OBLH9eaRN+w5jjk1Gztv8AlyPp2odvw46VCbjZnLc+9GqVySxFK3mc/TrUPibx7p/w/wDDtxquq3H2eztV3MRyznsqjjLH0/HgZNVmvNjHn9a+ZP8AgoP43uJfCl7awtI8Wl2bztEoyC5Xdk/RduPrUTqOKujSnHmdmfPX7fn/AAVT8Say8mm+G9Qm0XR97RtDZTbZpBj+NhyxP937oyPlJ5PgnxesT4E8EaDY6qsl94y1a6il1G9d87JZPkFsvOBGhZQT1dl3E4IC8X+zX8M774qfHmx1DxBaywaXpitrHlTLxO6sohDDrjeysQeCEI712H7Z0c5uBfBWVbWaOdW90cOD+lcNbVWZ6FF8sk46HL6HrQZoSpZNw2sCehHYj2rsvC/iApfXFm0qB54sxtjLKcdRXmev3K2l/wDbI1/du3mOASMHrkf19aq2njpoNdhufO+UfIT0x6D8f618/Uw/tY80T6anivYy5J9zU1Hwtd3HiLy9a1i4e3Z8gwRhcD3zmvYvhn8DPBLaabi58Ua9vVQVSMpznqM4yPwNefwx/wDCR/vtjL5nUYzmtjwz4A1LVb6OG3NxBbsRvlxtUDPPauOdZv3W7H1WXYilS95wvfrfX8T3w/Dv4bwaFD9j02XVrxlxm8O4gnqAMkY9OnXpXXfDP4K6D4Lt/wC1LO1NrqUg3ZEzssY/uAEkAfSsH4WfspX+iWtvfnVI7tJFDfNKXCZx1ruPGkf/AAhfh2QSSK0xO1Ujb5ieeR9OuK82tUm3yLY7MVioVY3tb8x3iz4gx3HhadmkRZLEhpRk/KOCc4yRxjntXD67+z/4W+N3h3R9Ql8Raj4R+JGrRlbG9AluLW5iaVhDBNbHA2gfeePY6ncSWA2mt8GtKb4leL7xbjzbjSdKmEk82Av26Y5Kxt/eCqFJyMEBc/erjP2WPiH/AMLP8bWratdwzahpcslrCqthhGZTkDnjOccdefWvoMgowjOfNvp+J8Hn9acqUWtnf52Nb9hz4neMv2bf2oL74c+MvO0u+04GXYs263l3MuyaFzw0cgIKsMdwQCGA/YX4b+Mf+Es8LQ3En+uUBXwfvccN/n0r81v2/wD4R/8ACRv8NvGWlxqniDR9VtdPJj63dncXCK8RPcK58xc9MuP4zX3p+zfNJbaatrITn7KrHd1JBA/rX1cHZ2PkZWbuj1hTuP8AOnBuahUnrnFOz/OtSSQtzR0FN3Y/z0oBwTu7jpQA9TtH3qKYcGigVzxgHH+NKren50zOKbNJsT2qSXqJK6j7rVn32o7S1F3dhAfrWHqN596j1HGJPdattz83FfL/AO2Pps3jXQfGFpYMWuLuwkjt3RsbJDb4HzZ4AavV/iz8SLfwh4YvpvMMlxHGWWGJS8kmOSAo5Jxngc5wMHNeK+B/iLp/iHXPMW4iurXVIg0Tb8iRSeBn05P1wK56lS/uo6IxtqeR+GfCVufEUniWyC/Y9a0Kzjt4wMbGRmckfUMufTaPw4v9pDwLP4z8H6lH+7LeWQgVunBA/L0rq9cuJv2afiT/AMI7fNI/h7UhLdeGb2Rt8bws26S1J6b4Wfgd4yh5IY1qu9r4qeSOPY7TZ+YL8reuD0/rXPUi2bQkt0fGWk3R1jREWZWW4jXy5Y2HKOOCD7g1zOs6XNptyJYQzLG2Sp7/AEr6G+N3wEfw/fya9o6vJHJzdwIMs2OC4H95ccgdR7jnze+8Ox6lab0ZdzDPs1ePK9CpbofRRSxVJNblb4bfFGPSY4Ydu6McEsT24wff61714P8Aim0enCT7OzDqCnYY6n2NfM8vgvzLhmXfDMp5ZeDx7dD+Ndl4A8H65rF2LeDWrq3WQBSBGpYD6/8A1q5cVRoy9+9jtwWIxMP3dr9tv1PpLwd+1DcWuoPbXDrao3yKXbhQMdx+fWjxJ8Xrz4n6rHofh8rd6tNkSSLkw20ZIBlcg/Ko9+pIAzmud8G/sjaVLbpNrmq69qHy5MbXfkIPXAiVT+BOOTXuXwv8BaT4PtlttF02y02xDb2WKMK0zf33bqx92JNea3Rg7w1Z6Vq9XSpovxN74U+ALP4V+CbWztfmKfPPMw2vcSHl5G9yfToMAcAV+Zf7OXxOn+Gvx/0+4jkkWK5vRbHDY27pl/wFfp54r1+PS9MuJGb/AFaE4J9BX5Y/s/eCW8e/tEaHpkis0ceptcz7f7kLGQ89slAM/wC1XqZA3KVRvrb9Tx+Io8tOml5/ofsN4hlj8feKPh/pinzNsr6lMNv3EiQ7WJ7/ALx4/wAQD1zX1D8L71fDesWqsHMcsXksW/gBK4P5181fsyeGrnxN8QtQ1p2/0Kzs7fTLM43CNxlpSAfXMY9ipr6A02Uvq7bZVWGILGSwzn5sk/hxX1SlqfGSPblUD86cDmq9lew30PmQyRyxt0ZTmrAOR/T0rYkcT83T8u9Iw+b6c0LgClzn8s/SqECD5elFAIUc9TzRQPQ8TMoVc1RvrxY42ZiqqOck8CsHxr41j0uE28c3l3UgwCMfux688Z9K5O+aS/t991cSTAno0m/k4+6FyOmfTvWTqJOyKjHqdFqvjCF9wtv9II43A7Y/++u/4Zrkdc1a51ncDceXGoPyRcBz+JBOfwFMczrKqorGMLuC7G4X2OP85qlPi2mYSR+Y0nVcHj9e34dKy5m9wukrI57W/DggspJPN2L1d/m3A+pOOeK+SPjpBqfwU8aS6pocKzWNxMZZrRnxuLcs0bD7hJ5IwQSc4zzX2pqUj3UJSSGFtufvPu3V5d+0P8G4/HHh3zIoxJJAABtUsPpgDr65NTKF1oVGprZnm2k+PfCv7WvweuPDOtTSW+Nk1lOdi3Wm3SD5GBIIV1yRgnaysy8oxJ8xHwp8e/CjV5LWazuNWsYZClvqenjfDdKDkFowS8T44KP0YEAsBuPnfjbwXqHgLxTNdaW01rcxj5wqkBx3Ug8MP89a63wH+27rHgyO30/XLQ3WnzYi+1xyFlU42gOp5HGBnce3G0ADOMrqzNOV/ZPSdM1ttU0cfatNvoTIpAldDz128EDvx1/wry3x98LYtMluNQ06MyWv+tuoUX/j3B5MgH931xwOvTOPXvAn7TPhW/8AEyMJbW3vrkhSJV2zSjGCpYYaTjHUenFe1aN4c8I/EC1jmWGzF0f44Jdky/UKQc9+R65HWsq9CFaPKzowuLq4afOtV1Pz7vNDRZfMUeYvaum+H1pJpes200aqyqwJRuP1rvvj/wDsta58IvHN1Jpdjcan4evHE1pJbx7niDHmIoOcq2RwD8u0nGcVyPhfxRZ2OpfZ7rEU8bFXjkG10I4IIPIIPBB6EV81iKM4XjJH22FxFKqlODR7t4a1KPUVVpFz/sfwj8K7rS7qHTrHfI/K/wAIHP0rybwz4ys7SBWiePGMZEgq34o+IV1dxxaXo9pNe395/q4ouWPueyjnlmOB615vs5SfKtz0JVFFc0tkZP7TPxg/sfw1fRwSATTIyKoP3QRXzL/wTl0WTxH+0veXENubqa3sJ2t4/wDnpNJKioPxG78K+qLX9il/Fd9bv401Ca8ub4b49I0pjzkj5XkxvOc87AuOfm719Ufsv/sceGP2f3OrW+iWGk3zQfZreztkBW1Xkl3/AIpJDnlmJOBgHqT9TleClQg3LdnxmdZlCvNKnqkei/C7wbH8Nvh9a2sUUayKmWMZIZpmJLs31JJrrtOsfNitwqyFmy77vvDj0rOsrltYvsxxlYowdnHJB4JPt1H51v2c8YG7aYtqFR9PTPqP6V7PLZHzUpXZveDdbPh/UY5JpHW3nbY+fun3x9e/WvSbS7jvIVkikWRG5BU5zXzzrGu3Gp3ax6dcW6x225nM4/dysOq5ByuP72Djn5TV7SfilN4UlVrpp9Nfo7N+9tn9/MHygH/a2n2HFaRbQeR79ndTg+FNcb4Z+LFlq0S+cyRyMPvKcq1dVFdrcxho2WRW6Fe9aX7D1LBbHbNFQ7j6GiqC/c+FZNWbVtftZpG+WSN3kZ+AzfKQB1+Y4P8A9ft0Caet3aR7iGG0h2KnCEdATtI6j1H1rhy4uvAMOpSSSRvpd6DNx8zK2YuRjjDPnNb/AIC1j+3/ALdb7rcyxyLJG2GVwHH6gtuHJ/xrmXmW2aLQMLeNcyDaNxHG0D3x19ec1Vvzb/dbcm4HADfKDnO7pjPtWoLR1RUkZ9qvwBsUx5x3P4ZGaz9UgkteskQO7JRlz7cemOvFNx1uZqWhDaXBnt2VWba33sHceOmTjAz6VEzqJ5IvMmZWUsZEAUMQfcZ//X3qo9tNaS4huPMK/MWVgq5PTOVOOtZU+sQwySRLumkU5zNufGePooH4jOKqKEzzj43/AAEXxYJLmxhh+0ZJZmbBYdDwQP0zXy547+EcmlXstrdWsULFsPEyfLID3zj8jX3vaXjata7pGZmU4ZCc54/LPX8+lcH8X/hVZazaW88Vt8uCWLxlcKcfN0z6VMqd9UaxrcujPg/X/hck1pImJrq3hG1htHnW/seu5fQ9fr22L7w9q3wv+Bui+JPDN7fLeR6g1vKI7iRFeL5jyu4A4IAwQcYPGK9c+JnwnutHzdRxzRRRnMbr83l8c+vGOoIxVPxPo63/AOzEsjedN9n1j70TeW2DG/IBPrjjuO2K5qkbbnTTkpbGL8Lf+Ci3iTw5py2uuaLDrVl5iq4mt0bkA4b5QmCPUD9a03/ap8L/ABa8aapdab4XtbdbSUaqHuHMbXEkNvGGESun+tMxRdqli8ZbCjcWHmejeHJvENuPmWQwzRtskASQjOPb19O/Wux+EPwg0g6c0mqWNwNR0bVby+snjk+XdIsa4cd/9Qpz0B4yM4LjTW6Dmdj2Dwx+0V4b8SWV1NeaNGtvFcudMhURfaBEQApG0yIu8gMVD7RnOTXrHhv4k/D/AELw7qGqJb6jE1natcvDHBErT7FL7Wded3Bxwc5r877H4DX0EdvNo+oappshjQYFyYUzjB4XOR9c16J4OsPGWgwmG417TdWhxt8ol45nI/hDLgN+Kk1Ps7e8inJtcrPvD9n/AOMt1qOqxSX3hbStEsdX0tNY07ULK4M3nRmRl8ubcAVlUBWIBZcOuGJyB6fbaxN4wuC0MU1vCrFXMpxJMobGMZyozuHGD1+71Py4nxTHw/8Ag18PJJNOuLjzBew7bcKy2/lvDtBBwCPmODjoD0zXceEP2txMkaQ2syQhAGLks6dxk/xdhzmtqdktTnqRd9D6W0eAWEGxVjhaFVB24XCY7dBgemBn0HblfEXxO+36lJpek7rpom2XlxGPki9VDDgyeuOnfniuBj+K+ofEiT7OrXGm6PM+2eaJvMnkG3lQVPyA+nX37V2nhex0vQ7eCOxjijhVB+683dj3I6g/UVvvqzmemiOh8N3GyxSNfKhQfMMsXwPTNdBCvlbVkkheLP3g3XAz7YrAsb1FV1TyWiAyFH8XPqOhzzV4akpkPlySMWI3DbuwcenaiV73AkutAtorhZ7eOS1kb5mkgYx/N0+YD5W+jAitbw9491jwhOzMPt1rH97bgSfio4b/AIDg8YANZ8F9JtWGGeJvLLHY7YL/AEzVq1VmXzJraMR525JwR+VL0Hc9O0b4o6VqunRz+cE3jkAFsH8KK8sMljduzbinOPlkXn9f84oo9ox3PnvweN3gfWbf+BrCZ8nluVYEc9uBXOfCHXbiw+MLQqyvHdaTGZBIN2TkH+bE0UUpfCUup71e6ar28cjO8hZAWDhWDZBznI9qxLm2SCzDRrsfONw5bHHc0UU5GMStHAtzawyPuZmVm57EcCuf+J+mRnRftC/u5Gg3nYAMkevGT170UUR2A890XxHdSa0qNICIULDjrxnBHTHt0rt7uD7DaRSxMVaWJcjAwueuOP06UUVMWy5bnnHi2GPUvD98sscZVJHTAXAIHqP8KyPDHhi0174bXtpMn7lbuJkCgfIRFjjII9evqaKKmprJXNKXws57xL8I9CtfB99dCzVplmiIZscHeORxx+GK5fwdbxw6w8CoP3q3U2/J3KRNLHx2xt9QefbiiilIuk9TOsfDML6Zuaa4fy/lClhtxgdsVd8O+GrQanInl5jI5Q/d6DtRRSZV3c9M/sW3l+E/htXTzFt9TvVQNzgM65H6D8qseHNFtbjWXt2iXZGCwKnaeDnHHH5CiilTFW3PZNO8OWujaXaSW67d2OMDjHvjP5mrmh3bX+nW93IAZnUknJ4xwADnPH1oorpl8RzI6KxuNsULMkchLE/Mg449eveti41KRTCw2jaGCjH3cf8A6+9FFLqLqWrWVpNOkkPqV2kBl6e9b2jRm70mFpJJG8tSQpb5TgjGR/k0UU5AZdzq8n2qQbIsBuOP/r0UUUIUtz//2Q==)![Uma imagem com pessoa, céu, homem, exterior

Descrição gerada automaticamente](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEASABIAAD/4S0KRXhpZgAATU0AKgAAAAgABwALAAIAAAAmAAAIbgESAAMAAAABAAEAAAExAAIAAAAmAAAIlAEyAAIAAAAUAAAIuodpAAQAAAABAAAIzoglAAQAAAABAAARUuocAAcAAAgMAAAAYgAAIXIc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFdpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQAV2luZG93cyBQaG90byBFZGl0b3IgMTAuMC4xMDAxMS4xNjM4NAAyMDE3OjA5OjEzIDE2OjI2OjQyAAAGkAMAAgAAABQAABEokAQAAgAAABQAABE8kpEAAgAAAAQwOTYAkpIAAgAAAAQwOTYAoAEAAwAAAAEAAQAA6hwABwAACAwAAAkcAAAAABzqAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMjAxNzowOToxMyAxNjoyNjozMgAyMDE3OjA5OjEzIDE2OjI2OjMyAAAAAAHqHAAHAAAQDAAAEWQAAAAAHOoAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYBAwADAAAAAQAGAAABGgAFAAAAAQAAIcABGwAFAAAAAQAAIcgBKAADAAAAAQACAAACAQAEAAAAAQAAIdACAgAEAAAAAQAACzIAAAAAAAAAYAAAAAEAAABgAAAAAf/Y/9sAQwAIBgYHBgUIBwcHCQkICgwUDQwLCwwZEhMPFB0aHx4dGhwcICQuJyAiLCMcHCg3KSwwMTQ0NB8nOT04MjwuMzQy/9sAQwEJCQkMCwwYDQ0YMiEcITIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIyMjIy/8AAEQgAeAB4AwEhAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A9S3Uu6vQMRd1LvoAN1LuoAN9U59Xsbd9kt1ErDqu4ZFJtLcErhDqtpO22KdWPtVoSg8ihO4NWF30m+mIN9N3UxCFqKYEeaXNSMXNG6gYuay9Z8Q6doVv5t7OFJ+7GOWb8P60m0ldgk27HlfiX4jz6izR2k0lvajsjYLfUg/pXFy+KZUOI5Xx7k1ySk5O50K0VYmt/Gd9bsrCdmAPGeq/jXoXh/4ky3aYkUNIo+dMfex1I96qE2tCZJM9A0zXLbU4leJxuIzjPatPdXUtUYMTNJmmIQmimIbmlzSKFzRmgDA8WeKbbwzpplcq91ICIYvU+p9hXg+patPq95JPfXDySMcnnp/n0rmrS15TamtLmPcCLf8AutzfRs1Cuny3BysbCsWylFseuj3rcJExqSxln0q/ikkDLtYFh0oT1BxaPQ/COvEajYxK2QZWG30U8/zA/KvaA+RXZSd0Yz3F3UZrUzEzRQAzNLmkMXdTJp47eF5pXCRxqWZj0AHU0AfOfjLxRJ4j8QSXIJECfJCmOig8Z9+/41T03RJbsh5AcHoDXn1Ja3OynG+h11h4WgXbvQfiK6C30S1jG3y1AHtSSNG7aIs/2bbwj5UFYer6Da30L/KBIOQQO9J6MFqjC8MC20vxJbmcgbJNpB6DPGa95jcMgZTkEZBFdlD4Tjq7js0ZrcyEzRTAbuo3VIxd1c746aX/AIQvU/KkKN5WCR6ZGR+NKWwLc8H0jThdXjMxyqmu9sbVY9uB06V5cneR6NNWib8IyuGAx2q2p+laoiRFcHI61mTkrkk1Mhx2PPPET/ZdYWReA4zxXuXhG6N34U06dmLF4up9iR/SurDnNWNrdRurqMBN1FAhm6jdUjF3Vj+K4muPCeqxKMsbZyPqBn+lJ7DW54l4W+czE/3wK7NLu0hGGnjDDrlq8zlvI9FO0UWYNUt3PyTKR04Iq4b1FTdkfWtUQ9TKu/EtnbsfMlxj2zUCa/p18NqyFcjgsuM0NXQlKzOR8Xwk3NvIOQykD8Mf417h4YtfsPhjTLfutshP1Iyf1Nb4ZbmFbc1d1JurqMA3UUCG5pc1IwzTWwyFSAQRgg96APm63e8tpby2O+0KSkPEq/MD6ZPTGKTFsdzzyHju0jE/kBXn7SaR2L4bsWKZlfNnMwz90jJHH1GakHiPXJ4kgaQJC0gjMohHX0z0zTFrbQWRngJEkby+WNzE8tj9BUhvo5UQpBIiP0Dp1+hH+FNXtcHa9hptXn1vT7V5pBbzsAwdyQgzgkZzjivoiPYsSCPGwKAuOmO1dNDZmNVajs0ZroMhM0UCDNGakYZpDnBwcHtmgDwZLeR9fuo77O+VyjFhgmQAcH6j+VWz4f2l/LTardQeQa85XuehoRy2D2FsHdUO35YlKgbmPQD3Jrpxo4k8FpYALuVQQ2ON453fnzRfULK2hlWunW+ow7lZllj+WWHdzE3cfT0PcVY/sGKH96pClRklhVW0JuYlxB/aV0bmEfKHSCJh0bklmHt2z7GvZdH3rotiJDlxAm4++BW2H3ZjV+Eu5ozXWcwmaKAFoqRhRmgDznxZp0Uet3EkkStFcBXwR1wOT9c5rMgsJ5s/Z767RPQy7gPzBP615021No74JOKZI+iw2hF1PNJPMvAeVy2zPXGelbUesafHpmWnQRheuelSty9loZsOm2OpyLeL99eEmQ4bHpmm3WjJtIZ/PX0mJb+dVbqiNOqH6ZbGSVIY49zAgLgdD616NCoigjjznYoXP0FdOHW7Oes9kSZorqOcKKADNGakYZppNAGR4jtFvNGn+QGSJd6HHIxyfzArh7O6WMhc4Gea4cSrTTOzDu8WifVLlJrYxdc9a56PTrd02EosI5YkjAP+NY9To6HSafPb2dqkKEbR05plzfKxO05BqjJm94SiItp5z/GwUfh/+uunB4rup6RRxz+Ji5oDVqQx2aKZI3PvRmoKAmmk0wGMQRg8g9a8y1/T20nU3QAiGT5om9vT8K5sTG8b9jow8rSsYc8M9wNxunRf7qntVYadCrAPK5z/ALfFcsWup2xslqXIdMtkBZZJBjoQ5qdJSpEfPHc0dTKT1PTNE2rpFqFAAKA49zWmGr0Y7I4HuLmjdVCHZopkjc0ZqSgzTSaAGk1xHjbULK48myiuEe6hYs8anJQH19D7dayrtKmzWim5o5S1VZjtZsY4NaC2Fj8rFiSDzzXnxO5j5ktIoyVYDHbNZUD/AGi63D7gPHvVPQzNBfHl/oGpJaXVtHPp+BsIG1wvfB6HBz1r0qwv4NSsYby2ffDKu5T/ADB9weK7KNTmVmc9WmkuZFnNKDXQYDs0UEjc0ZpFCE0hNAHMeONffQtAZrdtt1cHyojnleOWH0/mRXlOhI/725kYlpTjJPJ964cVLWx24eNkmakoZW3IxU+1Q+bd9FYfWuaLsbsaI55W/eyEj0FatpEETgVaM2VtZt47mydXGWVSyn0Ip3hbxfdaJbLaeUk1vuLbWyCPXB7flVwm4O5pGkqt4s9D07xfpOo/KJ/s8n9yf5fyPT9a3VYFQwOQehHeu+E1JXRwVaM6TtIdmirMQzS5pDGSSJFGzyOERRksxwAK4zXPH9rZ7odNUXEoOPMb7g+nrWdWooLzOnD4d1ZeSPMda1W91edpb2d5SD8oJ4Uew6D8Ku2ThIkWvOm3JXZ2ySjKyNHh1qILz1xUpEsnjjGM5zV6P5UArSxmynqJxazN2CGuZtz94j/PSmb0NywrkVo2OsXuntutbmSLnOFbg/UdDQm4u6OxqM48sldHcaL47jmCw6mnlueBMg+U/UdvworthWi1qeRWwNSMvcV0dpmuc1vxjZ6Xuhgxc3A7KflU+5/oKqpNQV2ZYeg60+VHnur+IL/V3P2mclM5ES8KPwrCl6158pOTuz3OSNOHLHYryLvyPWtG1Be3UjrS6HJVWty9DLwAamIBPSkjJlmBecYq6FqzN7mDr11j/REPXmTH8qxIARuJPtig6aStYnzinK1I6kyRJeSKKClI/9n/4THoaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLwA8P3hwYWNrZXQgYmVnaW49J++7vycgaWQ9J1c1TTBNcENlaGlIenJlU3pOVGN6a2M5ZCc/Pg0KPHg6eG1wbWV0YSB4bWxuczp4PSJhZG9iZTpuczptZXRhLyI+PHJkZjpSREYgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMTctMDktMTNUMTY6MjY6MzIuMDk2PC94bXA6Q3JlYXRlRGF0ZT48eG1wOkNyZWF0b3JUb29sPldpbmRvd3MgUGhvdG8gRWRpdG9yIDEwLjAuMTAwMTEuMTYzODQ8L3htcDpDcmVhdG9yVG9vbD48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICA8P3hwYWNrZXQgZW5kPSd3Jz8+/9sAQwACAQECAQECAgICAgICAgMFAwMDAwMGBAQDBQcGBwcHBgcHCAkLCQgICggHBwoNCgoLDAwMDAcJDg8NDA4LDAwM/9sAQwECAgIDAwMGAwMGDAgHCAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwM/8AAEQgAtAC0AwEiAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A/U1brPbvxin/AGr1B9jWaJ+lOExbvX6QeGaS3GSc8/SpFu159xWatw2MdKcJ8np/9egDUF4NvpTkvSPy49qyhcMfY4/OnrPzn1oA0RdZ6nnFKLzJrMFycfzpwusev50Aagu8E5NILwMazPtJIrC+IHxV0H4W+HrjVvEOrWuk6faqXkmnbaoA5wPVvQDk9gaTaSuw30R2Iu9x/n7UhvcAHtXwT8Xf+C3HhPR9Qks/B+h6pqOMqdQ1GFoIfqkQO5gfUspAzxXj2sf8Fc9dvNRMlxeRwrMpaOOC02/RcmYPjp0OfrXnVM1w8HZO/odsMvrNXat6n6pnU9vJ7Hg7hTk1NZGG1ucZ+tfmT4I/4KoR6zcFl8TWcUysF8u48+OPcRyHLlmQjptbHU8mvqD9nz9tTSfjBZvAtwsGs2ah5rEypNuUk/PC6/eXI6evBxkAbYfH0qrtF6kVsJUp6yR9Lpeq4pPtmTXL+GPGll4s01byxuIriJsFvLfdsPGQa0zeb0+VvyrsONmmLnn9eKGuMD/69ZpuMmmvPtNUSaBvMeuKbJeCs8zdqa0pJp9Cdy8bzmomu+feqjT4Pao2mwevrVklhrg5/ioqm0+D/D+VFOwuZEKyEn8fWpFfH9Kqo/Xn605H/wD1Vlym9y2sm2nCXjn+VVg2Vpxl/lzRygWBNyMU5JuPp29aqiRdvr9KcJMH2o5Srljzs4/rQJ8N/hVdZNze56AV+aX/AAVq/wCCsr+Cru6+HXw51S4jlBa31bU9Ok23FwcYa3t5R9xOSskoGTyqEffrnxVeFCHPP/hzSjRlVnyQ/wCGPov9sv8A4Kw+B/2X7y40TS2h8T+JrfK3CRXASz05/wC7LLyWkHUxoMgdSmRX5c/tSf8ABTDxB+0jrL3Wp3tr9jhysNtZu8dvEeu7CliW7ZZjjtjpXzf4mg1LxbILrULu3sIz8scG9ECD+6u4gH8/8a4nxJ4OhKu9nrMkzR8uViaRU9iyjaPzr5XEY6ribpu0ey/V9T3KeHhh7OKvLu/0Ou8VftKfZ2ZY0tpMnG77Q5kH4k8fzrz3Vvj5cXdy21pFXOdpcN+P/wBeuf1iKGVds19FLJ0+SNt36DH51iSeEZJmLQs8y56hD+tefyxWiKlWm+p6GnxdnvcSJdSQ3SgeXKGJOB/C3qP89evdfCT9s7xB8P8AXbK9hupoZrOTa8auVx9COV6nBUgjJxivnyPT7mzIXa3HYDpSwSzmbbtbf0IzQvd2J9pJ7n6//s3ft8at4n0D+2tJkuJNX0uP7XfW0NxslvIC+GdFUDcyFh8gDfe4GCVP3d+zN+3fp/xM0qxW9uIZF1JkW0vFXZHclsEDAAAlK5ygADOr7eqivwE/Y9+LFz4F+K2ji4llgt5JDAZCTtjVgc554AOG9QVBHNfXn7Pvxw/sXwj4us1uJIdPsb46nbSl9skEccu5JY+3mRPHAxAGdqnjpu97L8VKKWpx4ikp9D90dM1ePUbMyJIrR+Y6KwOQ21ip/IgjPtVlpsZOf1rw79iD4rr8V/2f9D1dVZBqVul6Pm3480b2GfQMWH+PWvZRdeau4dPSvqI2kro8WXuuzLRm47Ux5+arGUlePypDN/n1q1EjmLJnzlj+lRtNioWmB9/xqNpSR+FPlJuSNPz/AHqKrs/PGaKdkIFm3f4U4XNU/M/nThL+NZ8pq5Mu+filM1U/O4/+tilaf/62KXKPmLf2g/8A66cLnBqms+/2rG+I3xH0v4VeAtY8Ta3cNa6PoNnLfXkqoWKRRqWYgeuBVEnyx/wWg/btuf2TfgHb6JoOofYfFHjJZIlmj/11nZrhZXXn5GdmWNW68yFcMoZfws1zx/Mwa4bM17etgO+WKgck+wFdl+3z+19q37YPx31fxZqrzoNUumNpau5KWFpF8lvAo6BUXPTG52kc/M7E+XeEPCl94/1FIbdX2sApOOi5zivhc2xirVXK/urRf5/M+my+g4RUIrV/1+BY0bxPeXN4y2Vr57M3+tljDs30DA4/n9K6QeAfE/xHCfbC00acJESzhc9vmJAr3b4N/sww2ttCrxlugdiOCfQdzX0t4C/Z0tLSG3VrZkjyBlAu73Jz9O1ePHEOWkD345fFK9VnxB4S/Yi1bWnhZo0XzCOi9PavYfDf7AUtpb4dZGmZctuHC/lxX294V+Ftlp9kWt0hUrwGA711Wi+GrWJPmUe5P1rojTl1ZnzUo/DE+EdF/wCCe0F9cJm2kwCAzOmAxxVr4i/8E5NIm0JmtYlhul6FBX3tcaFawo25Y8NnHHQdv8+9cv4mt7eOD5goXGST/jWdaEo6plU/Zz3ifkD8X/2atc+EuvrL5Z8tn3RS4+QsCCBz0Pt7celW/A/izUtCsLy3ma6ha6ieGUbN32nzODHjsvUkkZ4AHOK/SX4u/C/R/H3hS8tLm1jl8xCvTlD6iviXWNKsfhf48ls9QVZUVijOybl25OCQOfr3PvgY2w1eRw4rCxi7o/Zn/gmP4d1Hwh+zh4dtb5GDQ6fBA+FG0z4aSTbjqqGRosjgmM4Jxk/S6ONgA529DXyF/wAEovj9YfE74BWehLNJ/aXh7dBskfduiDHYUPRkAIAxyABwAVJ+tRcZ/EZzX6NhrSpxcdj4zEXVRpllp+v60hm9/pVfz8AfnSGXP+eldPKYk7S00y8fyxUBm2immY0+UCcyEmiqvmAelFVyonmQnn8ZHPpSfaN3foap/aMChJ8Z5rmRqXvPyf55NO+0fN3+uaoefwcHtThc56fjTJLwn28n0r4q/wCC9PjjXvDH7B99baLMIbXWNStbPU9kjCSaBnBEfBHyM4QNnII4IwTX2P8AacjvmvkP/guFZ/bP2AdauOVWz1jTZZCTgbfPAGfX5iuPfFc2MT9hNrs/yN8Pb2kU+6PwWPhm71rxUtso8yVcKwUcLjkj8K+uP2ffgcvhzS45GiHmMg3kjkmvCf2f4o9R+LZVlXY29gD3Oc//AF/xr7g+Hen7l8tlC456dR1r8ozCrLm5EfomU0YqDqHUfD3w2LSWFvL+7jjHFeyeHr2MPHH5bMcc/JwPxrg/D1i9ugZtwVQcCu80jVI4PJSQrG0vyjnqcZ49a3wcdDoxDurHUaNZrpiSLDHsViXOF+9nufetSC6SO3VmjbdnAwlYlrqUaEMp38dRV2PUii/MF2H8cV6sb2seTPe7JtfdpNO2qw2t1GK4HX3ZMj5iCfSus1XVBHBJulba5HBIAQD0rndRbzVLK0cmRjBPQj/P6VjiItm1BpHG393JbmQMu1ZBg56GviH9vvTl0HX7XVofl8z5Cy9D3wa+1vHTNb2+4fxNjBr49/4KCqsngS1Y/ejm2H0Ga48PeMysYr02d1/wRs+Nd/pv7UHh7Sra8VE1eQx7HPynCsWAP+7uOOAcewr9wPNxX85v/BIj7ZqX7fXwzs4AzeTq32pwenlRRvJJk/7qEDPGSM8V/RMbnPf8q/RcjbeHs+jPh8f/ABE/Iuedj/61Dzbu9Uzc47003O30r2rHCXDPtPWmvNVM3PHXtTftHHUdKYF0y5NFUmuse/1oouZc7IRPtNOEny1ULkHPvThcMCfvVympa88qvvS+fiqxkBHc+lJ5mDxQMtifA49K+ev+CrHgG4+KP/BPb4o6ZaqzXNnpkerxhV3M32KeK7ZQO5KQsB9a963/AC/xHH4VV1mzt9W0m7tLpVe1uoHhmUjduRlIYY75BPFTUpqUXF7MqMrNM/m5/ZIV7341vuLHyrYyHuByBX3l4P1vT/DGh/b9QlW1jBCgseWr89vhv8SF8C/GDUm8F6e2q/b5J7XTf7WAg8u337kaVUdvmWNMsQ+OSAG4z2fiPxX4s8Xzq2seKrOMq2Bb2FiWjjHorSMePYivyzEYO9f32rH6BgcZy4dRgm3/AF3PvJv2jPCNtAzDV7RAgx+9kCgH+fapPD/7Suga3eFLfU7G4IOB5cgZl+lfnpofwsg8RTv9j1DXtQuFJL/ZLIThD15EcLYP196deaXeeAddZY7q7tblULRxalYMsgbHBP8Aq2257Yrt5acV7pl7etf31+J+oPhz4o2upoPLk3vjHXrVvX/iHDpVm0rybcKc5YDFfmdoP7d3jD4JanDHfaXperWsyFopDK6ibBGQCANuMjIIJ5HOK0vGP/BTrxh8XZ7bR9B8K6LYzXj+RHJJLJIzsfYsFQDqSSflBPHbSLum7kVMVBOzvc+wPiR+2HY+GrtUYSNbpE7yOvJDblVEH1+bn/Zrz1/+CmemWusC0sdF1O8kbjiNSQfTG7+Wa+Yxrc8FgY/EGoXGsXEhAjhsFNvBHjqF5Lt/vEgAckA81q+Ek8MzWsvnappNlM3yiG/8c31vIx/ulbfMa/TP9a0pyjJ2tf8Ar1MKkppXvb+vQ+ufCf7ZXh/4gQzW+oR3NjM3yohhZzn0OBwfb1A65ry/9uPQ4vEHwLvL61bzo7WWKVHHdTIqH374ryHxELHMcd5Z65axbRDDd2fiW6ubZwOBh1mI/wC+wCa4v446j4m8BeBY7zS/F3iS80O8lSyutN1K7N1CuVLoVDfLtyh4IyDt55wMXSg5XWjKlWn7Np6o+pP+Dd74Txa7+2lr+uXSqy+G/DNzJb5PKyyXNmgYD2UyDP8Atmv2sEu0bc/LX5o/8G7XwraL4beKfiRNC0b69FFo0R8h445mgubl5Zk3cbWVrdCF43Qnoa/STzMDtxX32U0fZ4aPnqfJYuXNVZaafHemmbnpVcy+9Bl/2q9I5ix5/H8qa0+R9ar+bimiXNFiWyyZ/wDOKKqGXPtRVcpI4S5J+tBfA21CJcr/ADo8z8q5TQsebgdaBKAariXH880eZgnj6UWAsNMM+/rTZJdyn5lA756Y96h80fjjimXMEd/bSW82fKuEMUmP7rDB/Q0Paw1vqfz2fHf4e+EPCv7busf8K7VbPwbqi3NzpFt9oM/2Rc7HhDMxbAYFlDEsFYKSduTk+NPB2q6bBJJb6a1xGBljIGCH645x7V0fxv8Ag7rHw5+O+r2baZcDXPAs39rpaKm1r9YLopcxL/e3x+YRj720YzuFfR3h/QLD4q+B9P1zw7JHdaTqkKzQyKB83HKsOzKcgjsRivy6blOrz1Fr1XZ9j9Fp0oQ5qVN6dH5dz5C1LT/FXiLwTD9m8UXdjfQuP+JZbSfY4xFgj5ApUEg7epHfvgVL4T+Eut614Zlk1TxJ5uqXFx/o9pdXAdIlHJY8sFy3RVzgDqO31be/s6/bId00PEmAcAZqnY/s0x6f500ara28KmSaeQhVRAMsxY8BQMkk8ADNdvM1HVaGUcHTcuZydz5w8U/s33vxN8YeAPB9vdW9rqniTUfLuZEPnRWsUcbNPKpOCwC4YA4JOFJyc16L+1L/AME5dN/Yz1XwT4p8Oa1q2raTLfpY6rHqQjLWrzo8UcwZFUCMu21twJBdOSCcd9+x9oVp8Qv2gLrxhp7NPoOko2i6DPg4vcMGurtQR913VI0PdYicDJFfXn7Wfwjs/i18IrjQtWjZrHVrJ7aUqAWjzyrr/tKwDDPdQa5aVRO6LqYaMo+0W7eny/zPzz8d/Cm1vNSt7qSO4gksEVX0w22VlbIJZ2yD7BegxnqTXAal+zRYaz4pkv7exvPsM0nmyWQG0rk5ZUYsAATxypIBwCa+v/gJ4v0/xfdf8IH42+y2fxM8OxLbzLIQo8Q24B8q+tif9asijLKPmRt4YCvTYPgzZ2s2XsozG2R93BzXfRi+X3GvmcsvZTV5RPhjwt+zg2t+KGkjmk8PwyuS1rDL8p/ADHPfP5V0X7T/AMFBpnw28LeHxK08/iXxLYaasgGSiPvLOT7Ac/WvrzxD8I9FstLuNQmW2sILVDLJcSuIo4QO7OSFUD1JxXzv4RvF/aI/aB0/W7PfceCvAa3UenXbKfL1fUZB5byRg/ehhQEB/wC+TtyM4yqcylqTOnTVO0fuPpL/AIId/tGf2dFB8K2hgtbJLGae1jjHL3KMWkfJ55RXDD1jQ9zX6QmXAr8wP+CQvwcms/jF4X8QzDbNb2mrXUqYycSl1UE99v2hQfqK/Tgy5FfZ5DUnLDe90bS9ND53OKcIVoqP8qv6/wDDWJzJgGkaTHtUPnY7/wD16a0nzGvbPHbRM0tBkz/+qoA+BxQZcjr2pku9yVpdrdM0VX8zHbNFAixgetHGetQ+bzSmXnrXIaku0Y6mk3DPX65qPduFI0nOe9AEynn7x/CkdlxnJ+tQiTC0jz5P8jT6AfA//BTX4YQ237UmgeJII1S6uNK3yyr8rPkPAR/tY8qA+2AfWvm3SPg6miXN5qfgzxHrHgW+v5RLdxWBjksbmTnLvayKULHP8O0dTjLMT+ln7X/wEn+Ovw+U6SIT4j0jc9ksjBFulbG+EseF3bQVJIAZcEgMxH57JZ3Gl+IJ7OZHgmtrgxSow+ZCrEMpHqMEfWvzrPqFXD4t1V8Mtn+f4n3mTVqOIw0ab+KOj7+T+7QqxzfFpY/Jh8fabqDNwrf8IbbLKfxE238dlUNa/ZO8b/GoKvxA8aa9qeh7g8mljybO1nIIYb4bdEVgMcb9xGPWvoLwHJa29pGqxxhh3xnPrzXWah5f9nM24Ku0np2rjjKUlecvyR6Lo007Rj97b/M87/Z28G2PhrWY4LKBYLHT41traMDaqhTg4HoOP1r6D8YNDqPhcGRo22rsxnpX59fFP4z+LvBXxGhXRYYWhjuP3yySNGXj9UIUqW6cHqeMjrUfxX/a08d6x4fa10aNYbyQqplnLCOL3YLyT22gj1zxg44aUVF3N8RTkrJHrnxY/Zq8N/HUR6N4ktYpbjTsy2V7Gds9uCeCrdRz2B6+lQ237Knizwh4ais9L8beKJbO2JIDa3ciTH93LOTgdueDV79i+/1fxP4Tnv8AXm3XCN5MQYYZsY3vgkkAnAAP92vctT1D+z7RWJXywOeOtdUIxkk3dejscNSPI2rJ+qufJ/ij9n7Tp23eJNJ1jxJdRnMcmtavealBn/rjLK0P/jldF4E0iHQ7aO3jWOFYYWCgDaiKFIAAAwAOwAwBXqXijxHHd27/AChlJIAJ61zPwb8If8LK+KtjoqXDWf8AaDPGZ1jEhiAjZydpIB4U1tTpynVSjqzkrVIQg3a3c+jP2F/Cq6D4z1GSzi2aPZaW0MLv/rneaWJ8uMAKD5LgLyflJOMgV9OB1Pf8a4X4TfDrT/hV4Wj0rTmuZo95lnuLlg01zIcAuxUKvQAAKAAABjqT1ofPOa+8y2hKhQVOW+7+Z8hmGIVeu6i2/wAi+CG70n44ql9pwf8APFSC4yPpzXpKRwyXUnx70bc9xUXm5pQ+6q5jO4/H0oqMzY7/AKUUidQE3+TTt/05qn5rbetO84k1zHQWhKM0NJgdfrVXz+e1NMxoAstN79qje4/D2qu0xOf84qJ7jH/66ALDzfh6V+dv7ZfhN/ht+0rrx2NHbazKNVt2/vCb5nP/AH9Eo/4DX6CPcfLXzx/wUK+C0nxJ+FX9vWEJk1XwuryOEGWmtTzIPcoQHHtvxya8XP8ABvE4RqO8dUetkuKVDFJy2ejPl7wZ8QI7W+hdvMlWQiJgrZCc8kjPQfnXZeKPilHFYNCh3LIm1WH3a+ctP1N7JP3cm2ROnqa5rxt4u8V6632fRWhjaPhp51ZkHttXB/UV+c4eo3eJ+gTWqaO68TXi3E3nX80McaOcO2FGM8YNX9E0HSNKjm1TXL3ToLKcj7IDMreeQQOBntmvnTU/APi/xVd+ZqniCRGUkBUthtTHoDmrWmfBS9vI1juvEN5JDyY/stqkbPn1ZlP6Y6V3YfDztf8AU7J4dzjdp/gfanhH4j2Ph6yjaK4t2jdRtZGBUj8K1NR+MtvNDt86N/O6YPSvjPQ/2Xnsp4tviDxHAjnJRLwrn8OR+ldlYeCtU+H11DDd6rNfWinCF/8AWL9TgVUm1ozx8RSUXa569rvjX7WWjX3XOa9o/wCCfnhVtY+Ieoa0wZrfSrMxq5/56ynA/EIsn/fVfKsHiBdQvY4oTu5C/Wvv79iHS7PS/gPY3FquG1KaWaVz96Rlcx/lhOK9nIqXPiOZ9NTwM4qctLlXU90s3/yauCX3rMtbjCirPn/5zX258oW/NpfNz/nrVMT0Cbn8PzqlIC8suakWTdzVFZ8nsKkWbI/CtIyMZbloSY//AFUVVMv+c0VXMyRvn8n5hThPzxVLzs5+oH0pQ+PSuW50Fwz5z0pr3GP/AK9V/N+WmtJRcCZrj9aje4xULzcfhUMs26ncCZp/lqvNID1wwYEEEZBHoRTWkxWL458eaL8NfCl9r3iLVLDRNF0yPzbq+vJhDBAvQZY9ySAAMliQACSAVKSSu9ioxbdlufm7+218LLH4H/HnVdP0lWj0ubZd28X/AD7LKgYxj1VWLAewA5IyfOdE8QfZrXbGqbmOWyM5Fd1+1V+0p4U/a4+Jd14j8GtfXGh28S6ULm6tzb/bHiyWlRCd4jIdQN4VuDlRxXlvhK9hi1QWtx2PyknqK/I8yqU1jKnsdr9Nvkfp2BhUWGh7Xe3zNW6129huZPJh81W4IZc1mafLqj61mCznV24RBGzAf0r2Dwpd6TosaTSLEzcY3jNdK3i3TReRyQxwjcuQyKOvTFVRu1a5pUqyWh5poVtqsA824jk87r8/BX8Kg8QRzX0Eklw20/WvUdQ8baY4PnND5m0EEdcY714f8Z/idbys1rYsrSSHB29hW0ly63PPk5N6kPha43a2sEbbpJDhiD91f/r9Pzr9Gv2I9ctb34K2WmwXVrJfadLP59ukgaaFGlZlZlB3AENwSMHFfnP8I9KNovnzfNNIcsc9PSvLf25NG1/wh450Lx7oN9eaf9ltksZLqzmaKaymWSR45NykFdwfaGHQoASCy57stzJ4epzpX0t2OPGYKNeHLJtdb2v+qP3WtZ8VbE/FfmP/AMEtf+Ct2veOvFemfD74oXX9rXGpTR2Wma7IB9pSZyEijuCP9YrsQgkPzqzDeWUlo/0rExzX3eDxtPEw56b9e6Plcdl9TCzUZ6pq6a2a/rdFwXHNHn5P+FVDJmlE1dpwl6ObipElyT9OKoiXAqRZeKqLM5rqXDJ9aKq7y38VFVdmZCJsDvR5m7+Kq/mdKcH5Nc50Exb3pDIx/vfiai8zH86a0ueKoB7SEdzUZf3phmHNMZ+p/ugsT6DqT9BVAPZstgsq+7HAHuT6V+Hn/BVT9vbUP2svjHcadpd9NF8P/DczR6RbIxWO7IyrXrjPzSSclSfuRFVADGQt95f8FFf+Ckfgnwj8G/FXgnwnrLa54s8QafLp4uNPw9nYRSERzs0+QGbymkC+VvwzDJXBr8hvCmhr4u8cQrOoaFXErg9G54GPwr4/P8zjL9xSd0tXb8EfYZVlVWhS+sVouMpO0bq2nV99bpLyufQv7MuiTeG/hVp8NxmOa7Z7woRyqyH5QffaFJz0Jx2rp/ENr5gEkbGORDkHH3ah0W88uSPYvAUDA7DGK1rpPOhb6c8V+dKTlNzZ9g4qEFFbJHN3PxD1TT4RHOrTRr0IqvL8bb6FdsccvJyQc81duoFgkwy5VeOaS1tbdlb9yuF6cV3UazVjlqRuYF38Q9e8RTYVZF3fxela/hLwnJJIJbhi8rnqecVpW1vCyqFUdc8Cug8O2W6dNy4649a6Yxc/iOSWh1vhexW0sflGOPzqDxnp9vruiXFrewxTWt1GYpopAGV1PUEVrWkAhtFXgfL0rJ8UTCGzZVbDHitZRvoiKUtbs+Pdb8Ev8GfjFJa2c0y20ciS2rhvnjR84w3XKsBg9eBX6qfs8f8ABYTwv49tLW18e6ZdeGdQAENxqdoTeWEsw+V5HRVEsAZvmChZVUHlwBmvzT/aV4+IiuOWisYifbEmf5VT8L3kltNeyBiFLqBj1OTXfhcwrYWp+767rpoe5g8kweY4ZUsUno3Zp2av+HTqfvd4X8XaX440OLVNF1TT9Y0u4/1V3Y3KXED/AEdCVz7Zq/5v8q/Dz4bfGXxB8LNf/tLw5rGpaHqBwHmsrloTKB/C4U4df9lsg+lfVnwl/wCCv3i7QII7fxXo2leKFXGbmJv7PuiPUlFaI/QRr9a+nwvEVCWlZcv4o+fzDw7xlP3sFNVF2+F/i7fivQ/RxJto6/rUglOe/wCdfOXwd/4KX/DX4oPHb3t5deEb5uNurKq2zn/ZnQlAPeTy6+g7G/hv7OG4t5obiCdBJFLG4eORT0ZWHBB9RxXu0MRSrLmpyTR8LmGW4rBz5MVTcH5rf0ez+RcMuPX86Kh84DrRXUeboODZH1pVbrioN2B/Ol8z8axOgn3nH40xmwfevOPjv+1T4L/Z0sc+ItW26g6B4dNtQJr2YHodmQEU9mcqpxwSeK+D/wBpP/gqF40+KLXWn+HJH8H6I2UC2cpN9OvTL3HBXP8AdjC9cEt1Pl47N8PhdJu77Lf/AIB9RkfCOY5nadKPLT/mlovl1fy07tH2l+0t+3F4D/Zmgnt9Uvv7U8QIhK6PYMHuFOOPNb7sIPH3vmwchGGa/OP9q7/gpD42/aKeXTWul0Pw3IcDSbBisUw7ec/3pj0OG+TIBCKa8T17UpdSlkZ2YtISzEk5J6k/iea5XVGzMcdugr43MM6xGK91Plj2X6s/VMs4UwOVRVSK9pU/mktv8K2Xrq/Mz/FV3Nd+Ibq4kZnaS1YAk9MEE4+v9Kr/AApT7P4hmO3lQgyfxqzqcS3TFj95o2Q/4VB4LRrfxKxJ/wBfGrKPp2/WvJp9jz89ptv2i73+89o0PWwt6kbHAYcV2lnfCSLYfmwDk15rLCyRQzchl9K6jw3rW+FWb+IcE9q5ZU0pHnRlzR1NrVLby5N4VmXOCBziqscMDTLJlct1Hp9a0I51urfr+Oc/hVSSxXzgyhRzjrWkYPeJjJrZmro9pDgElcZyMV0Oh2+bnzMfdHGawtJtlh+8F59RXYaLErRMw43cAegr0IRutTgrSa2LaHYvXPHrWRrkJvRt7bsH2rajtz5O7advQe9c38SPE9v8P/C91qlz8ywjEcfQzSHhVH1/QAntTjFBGLbUVuz5o/aGvVufinq1uv3o7UJ9MDP9aqaDMp0pWXjztrN9cD/61cx4j1i41DxDdaneOskmpTN5rY53sM5HoOMAewrZ8MJcR6Sqz+XuzlNhJ+XoM+9S97s+wyf90/ZPf+v8zaE5/wAferlpfNEuWJ+lZbHaO55/WpIrhgMfeH1qJWZ9NTqcp0FtrkkTfK3TvXtH7NX7afjX9ni6VNH1HztJkffNpl2POtJD3OzIKMf7yFWOBkkcV4Dbz8f3vx6VastWEd1tONp4rWjWqUZc9J2ZpiKdHFU/Y4mKlF9Hqfqt8P8A/gqZ8O/EPhiG41yPVtC1I/LLaxQ/a4wePmSQYyp/2lUjB4IwSV+Xq6u0BZQzYU9jRXux4kxFtUvu/wCCfIVPDzJZSck5ryUtF96b/E/dRj/M14P+3/8AH3xF8BvhZps3hua3s73W71rJ7povMltkEZfdFk7Q3GMkHAPGDggor6bMJSjhpyi7OzPyjhulCpmlCFRJpyV01dP5H5c+NPEd94h1O4vb67uLy7upGkmmnkMkkrHqzMxJJPqTk1y17eySSkFuFFFFfl+89T+msV7sbR0RWnmZ0Y+xFc/fnddMKKK07njY5+6inM3lzpj+8KTTV2a3pOCf9b5Z9wSR/Siioj8R4GP/AIEz2DS7dZ9JDMMnJX8jimWcfkswUsFAzjPeiisep86uh0XhtzNC6t2atiCzj2nqOAeD6/8A6qKK3pbGFb4jU0i2UFT157122k2yiHaPlHXiiiuw4anxWNaHTUhQ/NI4mfdhjkJwBge3H6mvmb9svX7qb4h2ujl8WNnbJOiDvJIWDMfU4AA9Bn1NFFUdeW64jXseManGqfalHRUSQezYBrcs/ltYf93H9f60UVi/hPssKrVnbt+rJm+8q9j/APXqGOVg2OzfpzRRSR3y3LVtIQG/Oo5bhknjx60UVfQHJ2NCeVmk/AfyFFFFSdFz/9k=)

José Pinto Rui Chaves Luís Lopes Mafalda Costa João Gomes

# Índice

1. Índice ------------------------------------------------------------------------------------------- 2
2. Introdução ------------------------------------------------------------------------------------- 3
3. Desenvolvimento do Modelo ------------------------------------------------------------- 4
4. Ficheiro Input -------------------------------------------------------------------------------- 10
5. Ficheiro Output ------------------------------------------------------------------------------ 11
6. Interpretação da solução ótima, percurso correspondente e custo ------------ 12
7. Validação do Modelo ----------------------------------------------------------------------- 13
8. Conclusão ------------------------------------------------------------------------------------- 18

# Introdução

Na unidade curricular Modelos Determinísticos de Investigação Operacional do 3ºano do Mestrado Integrados em Engenharia Informática, foi proposto um trabalho que foca no problema de encontrar soluções ótimas. Por exemplo, quando um veículo de recolha de lixo tem de percorrer ruas que têm todas um único sentido, para recolher os sacos existentes ao longo da rua, ou quando há um sistema automático de recolha de contentores, todos localizados no mesmo lado da rua, cuja recolha obriga a percorrer a rua num determinado sentido.

Na realização do trabalho foi utilizada a ferramenta informática LPSolve, apresentada nas aulas, de forma a obter uma solução ótima que permita obter um circuito, ou conjunto de circuitos de forma a minimizar os custos, onde todos os arcos de um grafo são percorridos, pelo menos, uma vez e que o ponto inicial seja igual ao ponto final.

# 3.Desenvolvimento do Modelo

Nesta secção vamos explorar o modelo que desenvolvemos, identificando as variáveis de decisão e os dados, o significado das restrições e a função objetivo.

O número de aluno mais alto do grupo é A85367, que corresponde ao valor de ABCDE. Por esta razão, o sentido da rua B será para cima, o sentido da rua C será para a esquerda, o sentido da rua D será para baixo e, finalmente, o da rua E será para a esquerda.

Uma imagem com fotografia

Descrição gerada automaticamente

Figura 1- Identificação dos sentidos das BCDE

Começamos por atribuir número às ruas para as distinguir, sendo que as delimitamos segundo cruzamentos. Atribuímos também números aos cruzamentos, sendo que a variável que correspondia a cada rua era o conjunto dos números do cruzamento destino e da chegada. Chegámos à conclusão de que este modelo não era o ideal para representar o problema em questão. Deste modo, alterámos o nosso modelo atribuindo simplesmente um número a cada uma das ruas, de acordo com o esquema representado a seguir:

Uma imagem com texto

Descrição gerada automaticamente

Figura 2- Numeração das ruas

Segundo a escala proposta e segundo o nosso modelo, enunciamos os tamanhos das ruas, em centímetros.

|  |  |
| --- | --- |
| Rua 1 | 3 |
| Rua 2 | 3 |
| Rua 3 | 3 |
| Rua 4 | 4 |
| Rua 5 | 12 |
| Rua 6 | 2 |
| Rua 7 | 3 |
| Rua 8 | 3 |
| Rua 9 | 4 |
| Rua 10 | 2 |
| Rua 11 | 2 |
| Rua 12 | 6 |
| Rua 13 | 2 |
| Rua 14 | 10 |
| Rua 15 | 4 |
| Rua 16 | 4 |
| Rua 17 | 4 |
| Rua 18 | 4 |
| Rua 19 | 3 |
| Rua 20 | 2 |
| Rua 21 | 5 |

Segundo o enunciado, o objetivo deste problema é minimizar a distância total percorrida, passando por todas as ruas, pelo menos uma vez, e terminando no ponto de início. Desta forma, definimos as variáveis de decisão como sendo o número de vezes que cada rua foi percorrida.

|  |  |  |
| --- | --- | --- |
| Número da Rua | Tamanho(cm) | Variável de decisão |
| Rua 1 | 3 | X1 |
| Rua 2 | 3 | X2 |
| Rua 3 | 3 | X3 |
| Rua 4 | 4 | X4 |
| Rua 5 | 12 | X5 |
| Rua 6 | 2 | X6 |
| Rua 7 | 3 | X7 |
| Rua 8 | 3 | X8 |
| Rua 9 | 4 | X9 |
| Rua 10 | 2 | X10 |
| Rua 11 | 2 | X11 |
| Rua 12 | 6 | X12 |
| Rua 13 | 2 | X13 |
| Rua 14 | 10 | X14 |
| Rua 15 | 4 | X15 |
| Rua 16 | 4 | X16 |
| Rua 17 | 4 | X17 |
| Rua 18 | 4 | X18 |
| Rua 19 | 3 | X19 |
| Rua 20 | 2 | X20 |
| Rua 21 | 5 | X21 |

Definimos três tipos de restrições diferentes. As primeiras asseguram que cada rua é percorrida, pelo menos uma vez. As segundas restringem o movimento aquando de um cruzamento. Por último, a terceira restrição garante que o caminho acaba no ponto onde começou.

Temos que o primeiro tipo de restrições são:

Uma imagem com parede

Descrição gerada automaticamente

Esta restrição garante também a cláusula de não negatividade.

Este segundo tipo de restrições tem por base os cruzamentos e condiciona o movimento seguinte. Concluímos que o número de vezes que se entra num cruzamento terá de ser igual ao número de vezes que se sai dele. Isto traduz-se nas seguintes restrições. Considerando o cruzamento A como exemplo, temos que a rua 1 entra nele e dele saem as ruas 2 e 3. Esta situação traduz-se na equação x1 = x2 + x3 o que significa que após sair da rua 1 apenas temos a possibilidade de entrar na rua 2 ou 3. O conjunto destas equações garante o funcionamento correto do sistema e uma solução que corresponde a um percurso válido.

Uma imagem com texto

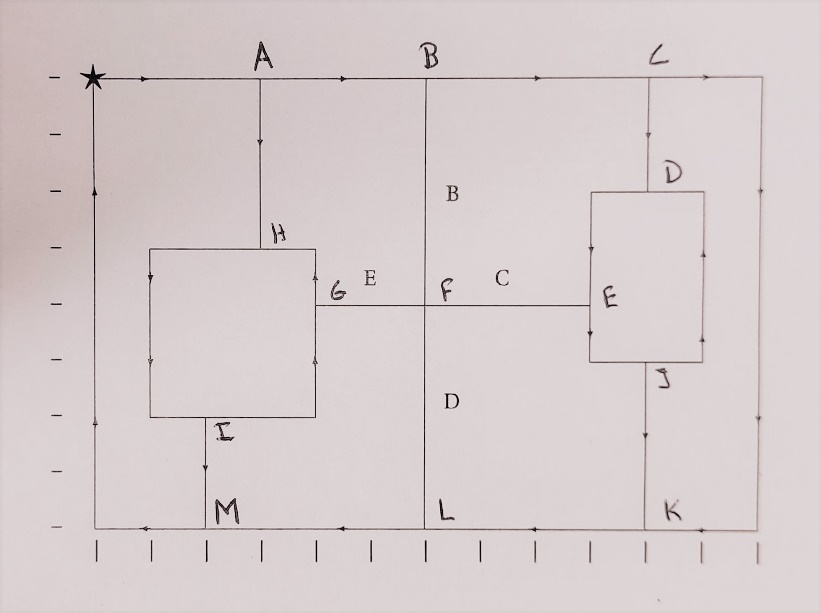
Descrição gerada automaticamente

Figura 3– Identificação dos cruzamentos e das ruas.

|  |  |
| --- | --- |
| Cruzamento | Restrições |
| A | X1 = X2 + X3 |
| B | X3 + X9 = X4 |
| C | X4 = X6 + X5 |
| D | X6 + X21 = X7 |
| E | X7 = X8 + X20 |
| F | X8 = X9 + X10 + X17 |
| G | X15 + X10 = X11 |
| H | X11 + X2 = X12 |
| I | X12 = X13 + X15 |
| J | X20 = X19 + X21 |
| K | X5 + X19 = X18 |
| L | X18 + X17 = X16 |
| M | X16 + X13 = X14 |

No que toca ao terceiro tipo de restrição, a nossa abordagem inicial baseava-se num sistema de coordenadas em que definimos um referencial cuja origem seria o ponto inicial. Considerámos o referencial positivo para a direita e para baixo. Atribuímos a cada movimento um valor +1 ou -1, consoante a direção e sentido, no final, para garantir que se acabou no sítio onde se começou, a soma de todos os movimentos teria de ser 0. Chegámos à conclusão de que este método não iria resultar.

A nova abordagem assenta no facto de a última vez que percorrermos o caminho, não vamos entrar na rua 1. No entanto, no início, passámos na rua 1, mas não na rua 14. Assim, numa solução válida, o número de vezes que percorremos a rua 1 é igual ao número de vezes que passámos pela rua 14, traduzindo-se pela restrição X14 = X1.

O objetivo deste trabalho é minimizar a distância total percorrida, cumprindo com todas as restrições enunciadas. De acordo com o nosso modelo, a distância total percorrida é calculada multiplicando o número de vezes que se passa em cada rua (variáveis de decisão) pelo seu respetivo tamanho. Este modelo traduz-se na seguinte função objetivo:

.

# 4.Ficheiro Input

/\* Objective function \*/

min: 3 x1 + 3 x2 + 3 x3 + 4 x4 + 12 x5 + 2 x6 + 3 x7 + 3 x8 + 4 x9 + 2 x10 + 2 x11 + 6 x12 + 2 x13 + 10 x14 + 4 x15 + 4 x16 + 4 x17 + 4 x18 + 3 x19 + 2 x20 + 5 x21;

/\* Variable bounds \*/

x1 = x2 + x3;

x3 + x9 = x4;

x4 = x6 + x5;

x6 + x21 = x7;

x7 = x8 + x20;

x20 = x19 + x21;

x19 + x5 = x18;

x18 + x17 = x16;

x16 + x13 = x14;

x12 = x13 + x15;

x15 + x10 = x11;

x11 + x2 = x12;

x8 = x9 + x10 + x17;

//x14 = x1; /\* restrição que garante que no final, volta para o ponto de começo \*/

x1 >= 1;

x2 >= 1;

x3 >= 1;

x5 >= 1;

x6 >= 1;

x7 >= 1;

x8 >= 1;

x9 >= 1;

x10 >= 1;

x11 >= 1;

x12 >= 1;

x13 >= 1;

x14 >= 1;

x15 >= 1;

x16 >= 1;

x17 >= 1;

x18 >= 1;

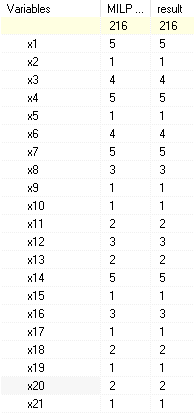
x19 >= 1;

x20 >= 1;

x21 >= 1;

int x1,x2,x3,x4,x5,x6,x7,x8,x9,x10,x11,x12,x13,x14,x15,x16,x17,x18,x19,x20,x21;

# 5.Ficheiro Output



# 6.Interpretação da solução ótima, percurso correspondente e custo

Após uma análise ao ficheiro de output, verificamos que existe apenas uma solução viável (a única solução apresentada pelo LPSolve), sendo essa também a solução ótima do problema.

Através desta solução podemos retirar o número de vezes em passamos em cada rua de forma a que o custo total seja o menor possível, consequentemente conseguimos traçar vários circuitos que podem ser exemplos de uma reflexão da solução ótima. Apresentamos de seguida um dos possíveis circuitos ótimos e a sua representação:

1->2->12->13->14->1->3->4->5->18->16->14->1->3->4->6->7->20->19->18->16->14->1->3->4->6->7->20->21->7->8->9->4->6->7->8->17->16->14->1->3->4->6->7->8->10->11->12->15->11->12->13->14

Uma imagem com texto, mapa

Descrição gerada automaticamente

A solução ótima apresenta um custo de 216 unidades de medida.

# 7.Validação do modelo

O enunciado impôs certas restrições, tais como passar em todas as ruas, acabar no ponto inicial e só podermos passar para ruas que se encontram ligadas respeitando o sentido.

Como podemos ver na representação do circuito ótimo no ponto 6 as restrições de passar em todas as ruas e acabar no ponto inicial são respeitadas.

Passamos então a mostrar as decisões tomadas em cada volta de forma a validar que a restrição de apenas podermos passar para ruas que se encontram ligadas respeitando o sentido não foi violada.

**1º Volta**

**Uma imagem com texto

Descrição gerada automaticamente**

**2º Volta**

**Uma imagem com texto

Descrição gerada automaticamente**

**3º VoltaUma imagem com texto

Descrição gerada automaticamente**

**4º VoltaUma imagem com texto

Descrição gerada automaticamente**

**5º VoltaUma imagem com texto

Descrição gerada automaticamente**

# 8.Conclusão

Na realização do trabalho abordamos e aprofundamos conceitos como variáveis de decisão, restrições e parâmetros. Com a utilização do LPSolve, desenvolvemos e obtivemos técnicas de uso do mesmo. Estes tipos de problemas são essências, bem como a sua resolução, visto a importância da diminuição dos custos associados.

Num âmbito geral alcançamos os objetivos propostos pelo enunciado, enfrentado algumas dificuldades na definição das variáveis de decisão e das restrições.