Rapport de projet d’Ingénierie Linguistique

Aurélien HERBIN, Morgane PAILLER, Nicolas PETITJEAN,

Laure POINT, Camille Rémi



Table des matières

[I. Introduction 3](#_Toc38285330)

[II. Extraction XML 3](#_Toc38285331)

[1. Présentation du langage XML 3](#_Toc38285332)

[2. Extraction des données du fichier XML 4](#_Toc38285333)

[III. Traitement des données 5](#_Toc38285334)

[1. Recherche de règles générales 5](#_Toc38285335)

[2. Présentation des différentes fonctions du code 6](#_Toc38285336)

[3. Implémentations des règles en python 6](#_Toc38285337)

[IV. Annexe : 7](#_Toc38285338)

[1. La GUI 7](#_Toc38285339)

[2. Les différents scripts 7](#_Toc38285340)

[V. Conclusion 7](#_Toc38285341)

# Introduction

Le but du projet que nous avons étaient amené à développer cette année dans le cadre du cours d’Ingénierie Linguistique était de récupérer des pages XML importées de Wikipédia et pour une lettre choisie extraire du document tous les tueurs dont le nom commencé par cette lettre ainsi que d’extraire le nom et le nombre de ses victimes. Cet exercice est assez fréquent dans le Traitement Automatique des Langues car nous récupérons des données brutes (ici les fichiers XML) nous les rendons utilisables et ensuite nous travaillons dessus avec des bibliothèques comme *nltk* pour en avoir un traitement particulier.

Python est beaucoup utilisé dans ce genre de cas car c’est un langage de programmation orientée objet qui est facile d’accès et qui a un grand nombre de bibliothèques pour pouvoir satisfaire ces traitements.

# Extraction XML

## Présentation du langage XML

Le langage est un langage de balisage[[1]](#footnote-1). Cela veut dire *eXtensible Markup Language* et son but était d’envoyer des pages sur le web et qu’elles puissent être traitées comme du code HTML, ce qui explique la similarité entre les deux langages. Le langage XML répond à une norme *unicode* c’est-à-dire qu’elle doit accepter les codages des caractères *UTF-8* et *UTF-16*. Pour simplifier un peu le propos on peut envisager un fichier XML comme un arbre avec une racine qui a généralement pour nom *mediawiki.*  Ensuite, on a plusieurs feuilles comme la feuille *siteinfo* et la feuille *page*. Il peut y avoir plusieurs feuilles *page* car cela va dépendre de si on exporte qu’une seule page ou plusieurs pages.

## Extraction des données du fichier XML

![A screenshot of a cell phone

Description automatically generated](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAeAB4AAD/4RD0RXhpZgAATU0AKgAAAAgABAE7AAIAAAAOAAAISodpAAQAAAABAAAIWJydAAEAAAAcAAAQ0OocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAE1yS2lsbGluZ0pva2UAAAWQAwACAAAAFAAAEKaQBAACAAAAFAAAELqSkQACAAAAAzkzAACSkgACAAAAAzkzAADqHAAHAAAIDAAACJoAAAAAHOoAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAyMDIwOjAzOjI5IDE0OjUwOjQ4ADIwMjA6MDM6MjkgMTQ6NTA6NDgAAABNAHIASwBpAGwAbABpAG4AZwBKAG8AawBlAAAA/+ELIGh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMjAtMDMtMjlUMTQ6NTA6NDguOTM0PC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPk1yS2lsbGluZ0pva2U8L3JkZjpsaT48L3JkZjpTZXE+DQoJCQk8L2RjOmNyZWF0b3I+PC9yZGY6RGVzY3JpcHRpb24+PC9yZGY6UkRGPjwveDp4bXBtZXRhPg0KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICA8P3hwYWNrZXQgZW5kPSd3Jz8+/9sAQwAHBQUGBQQHBgUGCAcHCAoRCwoJCQoVDxAMERgVGhkYFRgXGx4nIRsdJR0XGCIuIiUoKSssKxogLzMvKjInKisq/9sAQwEHCAgKCQoUCwsUKhwYHCoqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioq/8AAEQgBrQTJAwEiAAIRAQMRAf/EAB8AAAEFAQEBAQEBAAAAAAAAAAABAgMEBQYHCAkKC//EALUQAAIBAwMCBAMFBQQEAAABfQECAwAEEQUSITFBBhNRYQcicRQygZGhCCNCscEVUtHwJDNicoIJChYXGBkaJSYnKCkqNDU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6g4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS09TV1tfY2drh4uPk5ebn6Onq8fLz9PX29/j5+v/EAB8BAAMBAQEBAQEBAQEAAAAAAAABAgMEBQYHCAkKC//EALURAAIBAgQEAwQHBQQEAAECdwABAgMRBAUhMQYSQVEHYXETIjKBCBRCkaGxwQkjM1LwFWJy0QoWJDThJfEXGBkaJicoKSo1Njc4OTpDREVGR0hJSlNUVVZXWFlaY2RlZmdoaWpzdHV2d3h5eoKDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uLj5OXm5+jp6vLz9PX29/j5+v/aAAwDAQACEQMRAD8A8apRz0pKmtUeS8hSIgO0ihSexzxTWrBk8ukXsMTvJCB5YDOokUugPdlByPxFYkcrxZ2HGevFds7RTapq8VsjJdmGQPKxyjY+9heq5x3JrnvDlvBNeXMlxEs/2a1knjibkOyjjI7jvj2rbDxc5W/rqRUfKrkCw3j6TJqAlTyY5hCVx82SCfTpxVT7XN/f/QV09q41XwmiXEcUHmapFE8kMaxggr1wMDIz1xRfjSo5tSs7ibT44o0dLaOG3kEscin5cvs5zjByxFd88OkuZS0t+lzmjVd7NGLYW93fRXE32mKCC3UGWWUHC5OAMKCST7CqklzKkjKsyyBSQHVeG9xkA/mK3dHv5o/Cer7Utz5Pkhd1tG2cufvZX5vxziuckcyyM7BQWJJCqFH4AcD6CsqsYxjHl6q/4s0hKTbv0JPtc39/9BR9rm/v/oK6X4Y2dtqHxP0G1v7eK5t5btVkhmQOjjB4Kngiuu8RalpWsfEaXwNb+GNC0jTW1sWrXtta4ugBLhsSE4APPygYAIA6VhrdJdf+B/mXfRt9P+D/AJHln2ub+/8AoKPtc39/9BX0f4psfhpYzat4XvYdLt5obUi2t7PQLgXkLhAyubkbvMHfOMHuTznk9bfSvhv4G8Ktpng/R9bk1i0Fxc6hqtr9oDOwB8tORtIz2PQdCcmoVS6v6fjf/Ippr+vT/M8c+1zf3/0FH2ub+/8AoK9SuNHsLj4D6vqkWgQ2d8viExgeRumtozt/dbyN2ATjBr0hvCXh1PivdWb+GdOlt08Kif7GtoihpfMI3AAcOem4c+9DnZXf9e7zBa/9edj5l+1zf3/0FH2ub+/+gr2bVdA0Pxf4L8C6zNpNh4fudT1YafcJp0PkpJEXZd2CeSNo5OeT17V1Pimx+GljNq3he9h0u3mhtSLa3s9AuBeQuEDK5uRu8wd84we5POSU3G/z/Cz/AFBK7X9dbfofOH2ub+/+go+1zf3/ANBXrejT6R4c+AFl4hl8MaPq2pNq7QJJqFsHAG1j82MFxgEBScZIParfgC30u90PXPG/iLTvDOm2k16lvF5+kyXcMJwMpHbIw2gll+bJOc8VV3drt+tv8xdE+/6X/wAjx+1N5e3kNrbfPNPIsca8DczHAGTx1NWtc03V/Desz6VrUX2a9t8ebFuR9uQGHKkg8EdDXrnjG30zwD8eNM/sXQ9Klt9Sgt91tdWm6KBnl2mSNMjY3yDHpk1k/HnxG0nju/0VtD0iL7NNDML9LTbdTDyh8ryZ+Zfm6Y/hHpU89+Xzv+BVtX5W/E4u70e0t/ANjr8XiO1mv7m5aGTSFVPNgUbvnPzZwdo/hH3hzXO/a5v7/wCgr1rxw+naz8BtE8RxeH9G0q/udTaKRtMslgBVRIMZ5OPlB69a6nQvDvh2wPgbw03hfTdUtvEmnyXF9qM8O6fd5e793IDlMZ7dsdDzTu7v1t+Fyei9G/xsfPn2ub+/+grb8MeGfEnjO9mtPDdp9tngj82RPMjj2rkDOXIHUivTbK00Pwj8Kda1P/hH9J1u60/xJJZ282oW4kygIA3EYLDGflzjJzjisX4w6HpeifFLTBotjDYQ3ltb3LwQKFjVy5B2qOAMKOBTjLmkl30+9XCV4xb7X/B2Of8AEPw38ceFdHfVNf0r7JZoyo0v2iB8EnA4Vif0rkftc39/9BXsHxd0yDWv2irPTLyUxW941pDI4IBCtgHGe/Ndf4psfhpYzat4XvYdLt5obUi2t7PQLgXkLhAyubkbvMHfOMHuTznNVHycz8/wLcfe5V5fifOH2ub+/wDoK1fD2i674q1M6foFv9ruhG0pj3onyr1OWIHevXPhLoOl+KfBIvNa8KW9zPoVw7WUkMUUZ1U+WzeRJn/WEHBye2PRsx/AvxNLdfEHUrCXQdHt5LhLi5MsViI5oSAo8lSMbYxj7uOucnNXKVm12VyFqk/Ox4mbqcEgvyPYVpazpmo6F9iW/miE13apdCFeXiR87Q/GASMNjJ4IzjpVrXdej8TeJrWa70fSdHijZYZYdLtfs8ZG8ksy5+9zjORwBXS+LYFuP2ipba7iWSBtYgi8qRcqYtyALg8FduBjpinFuTiu/wClv8wl7vM+39foee/a5v7/AOgo+1zf3/0Fer3EdjrXjDxt4euND0yxsNPtbye0a3so4pLV4TlW8xVDsG7qSR8wwBgVW0GxstCXwzZaw1k8+sLFOllF4fgvWljkfC+ZNK6shPIxH0A9aUZOSVutvxv/AJDkuW/lf8Lf5nA6Np2r+ILx7XSIvtE0cLzsu5FwiDLHLEDgdutTaDpOo+IWv1sp4UNhZS30vm5G5I8ZAwD83PGcD3r03wbjw58XvFOg6ZBarY2sOoNCJLSKSRQqHavmMpfaAANu7B7jk1gfDnWpr7WfEl7e21i5i8N3Y8qCzit43A2nDJEqg+56kd6nnurr+W/5/wCQ+Wzs/wCa35f5nnf2ub+/+grT1TTNR0qx029mmilttSgM0EsPI4bayHIGGUjBHuOSDXR+KYbfUfhf4e8QtZWVtqE15c2sz2dqlusqrtKkogC5GSMgDPeo7wCT4D6Y84HmRa9OluT18swoXx7bgKpydn5W/G3+aYluvO/4X/yON+1zf3/0FH2ub+/+grc0W68nwd4ig/4Rz+0fOW3/AOJp5e7+zcOTndtO3f8Ad+8ucd+lc7VXd7C6E32ub+/+go+1zf3/ANBUNFF2BN9rm/v/AKCj7XN/f/QVDRRdgTfa5v7/AOgo+1zf3/0FQ0UXYE32ub+/+go+1zf3/wBBUNFF2BN9rm/v/oKPtc39/wDQVDRRdgTfa5v7/wCgo+1zf3/0FQ0UXYE32ub+/wDoKPtc39/9BUNFF2BN9rm/v/oKPtc39/8AQVDRRdgTfa5v7/6Cj7XN/f8A0FQ0UXYE32ub+/8AoKPtc39/9BUNFF2BN9rm/v8A6Cj7XN/f/QVDRRdgTfa5v7/6Cj7XN/f/AEFQ0UXYE32ub+/+go+1zf3/ANBUNFF2BN9rm/v/AKCj7XN/f/QVDRRdgTfa5v7/AOgo+1zf3/0FQ0UXYE32ub+/+go+1zf3/wBBUNFF2BN9rm/v/oKPtc39/wDQVDRRdgTfa5v7/wCgo+1zf3/0FQ0UXYE32ub+/wDoKPtc39/9BUNFF2BN9rm/v/oKPtc39/8AQVDRRdgTfa5v7/6Cj7XN/f8A0FQ0UXYE32ub+/8AoKPtc39/9BUNFF2BN9rm/v8A6Cj7XN/f/QVDRRdgTfa5v7/6Cj7XN/f/AEFQ0UXYE32ub+/+go+1zf3/ANBUNFF2BN9rm/v/AKCj7XN/f/QVDRRdgTfa5v7/AOgo+1zf3/0FQ0UXYE32ub+/+go+1zf3/wBBUNFF2BN9rm/v/oKPtc39/wDQVDRRdgTfa5v7/wCgo+1zf3/0FQ0UXYE32ub+/wDoKPtc39/9BUNFF2BN9rm/v/oKPtc39/8AQVDRRdgXbi6mENr8/WI9h/faoPtc39/9BTrj/UWv/XI/+htVeldgTfa5v7/6Cj7XN/f/AEFQ0U7sCb7XN/f/AEFH2ub+/wDoKhoouwJvtc39/wDQUfa5v7/6CoaKLsCb7XN/f/QUfa5v7/6CoaKLsCb7XN/f/QUfa5v7/wCgqGii7Am+1zf3/wBBR9rm/v8A6CoaKLsCb7XN/f8A0FH2ub+/+gqGii7Am+1zf3/0FH2ub+/+gqGii7Am+1zf3/0FH2ub+/8AoKhoouwJvtc39/8AQUfa5v7/AOgqGii7Am+1zf3/ANBR9rm/v/oKhoouwJvtc39/9BR9rm/v/oKhoouwJvtc39/9BR9rm/v/AKCoaKLsCb7XN/f/AEFH2ub+/wDoKhoouwJvtc39/wDQUfa5v7/6CoaKLsCb7XN/f/QUfa5v7/6CoaKLsCb7XN/f/QUfa5v7/wCgqGii7Am+1zf3/wBBR9rm/v8A6CoaKLsCb7XN/f8A0FH2ub+/+gqGii7Am+1zf3/0FH2ub+/+gqGii7Am+1zf3/0FH2ub+/8AoKhoouwJvtc39/8AQUfa5v7/AOgqGii7Am+1zf3/ANBR9rm/v/oKhoouwJvtc39/9BR9rm/v/oKhoouwJvtc39/9BUNFFIDRpQSCCDgjoRSVLbQ/aLuKEtt8xwufTJxXOtzQsy6xfTRyJJMP3g2yMI1DOPQsBk/iaxrW7nsblZ7SRopV6MP5e49q6h7O0uL6+sILQRNbI5SXexZinXdk459gMVyNaUpNO6JmtLMv3OtX93Z/ZJZUFvvDiKOFEUMO4CgY60s2t39xGyzSo5ZdjSGFPMYdMF8bj+JrPorodSb3kzLkj2J4ryeG0ntopNsNxt81doO7acjnqPwqCiiobb3Ksi5pOrXuhatbanpU3kXlq/mQybFba3rhgQfxFNv9Su9T1a41O9mMl5cTNPLKAFJcnJbAwBz6U2yspb+6WCDZvYgAPIqZ5xxuIyeenWtXVdBisLOWeGZWAuCkWbmM741GC2Ack5PQdO4qW7D30Na6+Lvju90R9JuvEU8lo8XlOPKjDsuMEGQLvOR1OcmoNA+KHjLwvpY03RNcmt7NSdsLRRyhM9du9Tt654xXJ10h00ppGnTWWh/bmniLSybZmw24j+BgBxQ7L5h5D9E+I/i7w6L7+x9bng/tCQy3JZUkLuer5YHDH1GD+Vdl4F+Kkx8TaxrHjfW3F3JokllaXAgw2/cGRf3S8HOTuP5153/Y8s8Et5KbfT4Un8lo5C42NjOMYZv5mmDSTb60tlfTwxYKncSxWQHGMFQTyD7UrJ6eVvw/yYarX5/j/mXvEfjnxL4ta0bxDq0t4bMYg+VU2e/ygZPA5PPvWndfF3x3e6I+k3XiKeS0eLynHlRh2XGCDIF3nI6nOTWF4h0+1sNVuY7SeEospUQLvLIPcsMH8zTJNDlhSFp7q2iNxEssQZmy+RnHTg/XA96PdcfIeql5jn8TavJ4Vj8OPd50mK4+0pb+WnEmCN27G7oTxnFXfDfj7xP4Rs7m18O6tLZQXRzKiojAnGMjcDtOO4weB6Vn2+iTTxQO9xb27XJxBHKxDSc4yMAgDPGTio4NJnlFw8zx2sds2yWSYkBW/u4AJJ4PQU7rUXYt+IPF2ueKNVh1LXb9rm9gjWOOYIsbKqkkfcA5BJOeta2rfFTxnrlvZwarrTXKWVwl1ButogVlTO1shMnGT1yD3rmb6xlsJ1jmKsHQOjocq6noRVahWA9Bb46fEZ1Kt4iyGGCPsNv/APG6ydL+J3jLRdBbRtL164t7AggRqqlkB67HI3J1/hIrn59Omt9NtL12QxXRcIATuG04OeKqUWWoXZrL4n1hfC8nh0Xn/EqkuPtT25jQ5lxjduxu7dM4p+u+LNa8S6pb6jrd79pu7aNYopPKRNqqSVGFAB5J61SstNkvIZp/Nigggx5kspOAT0GACSeOwp1tYwvqccEt5b+WSpEnzlX5HAwuQfqBTW/9f1sJ7FjX/E2r+KNaOra5eG5viqr5wjWM4XpwgA4+lbt18XfHd7oj6TdeIp5LR4vKceVGHZcYIMgXecjqc5NYXiHT7Ww1W5jtJ4SiylRAu8sg9ywwfzNMk0OWFIWnuraI3ESyxBmbL5GcdOD9cD3qfdcfIrXm8y+vj3xLHb6NBDqbQxaI/mWCRRRoIm7k7VG8nvuznJz1OYofGmv23i1/E1rf+Rq8jF3uIYY0DkjBygUKc9+OTyearWNoz6RfTxNZy7YwZEkRjJGNwGVOMZP16VHa6TJc6c181zbwQLL5RaUtw2M9ADT63/rUXSxa8T+Ldb8Y6jHfeJL37ZcxRCFH8pI8ICTjCADqTWmviyHVPGvh7WNTi+zS2T2qX1yGLicRMB5u0DIOwKCBnJXPfFYZ0S7Gr/2d+780DcX3fIExu3Z9Mc0T6NJFpjX8d1b3Fusgi3RFs7iM9GUGnFqNmvUJJyun6HQ+L/H2p6trOuQ2V/G2m310/wC9jtI45biEOSivJsEjLjHysew44rPsvHniLT7K0trW+jC2IK2kr2kLzW4JyRHKyF0GewYVztacGiTTRW7PcW8D3X+ojlYhpOcZ4BA59SKmMVFJIcnzO7JY/FetQ+KX8RxXzLqskjSvcCNfmZgQ2VxtIIJBGMe1PHi7V0u7m5gktbWS6tHspha2EECvE33l2ogXJ/vY3e9Vb3RrixgnlleIrDcm2YKTktjORx0pl3pb2N9HbXU8Me+NZPM+YqoIyM4Gf0o921g1vcdNrmo3GgW2izXG7T7WZ5oYdija7feO7GTnHQmrOr+IDqWi6RpMFsLa00yJwF37jLK7ZkkJwOuFAHYKOTVfW4JLbUvLmS2VvKQj7KpVCNowcHnJ7+9Z1Pf+vkLY0bLXtS07R9R0qzufLstTEYu4vLU+ZsbcvJGRgnsRWdWlb6JNPFA73FvbtcnEEcrENJzjIwCAM8ZOKZb6TPMLlpXjto7UhZnmJwrE4AwASTwegourh0KFFXraxhfU44Jby38slSJPnKvyOBhcg/UCrHiHT7Ww1W5jtJ4SiylRAu8sg9ywwfzNFwMmiityFxdeFb95obffBJCsbpAiMASc8gAnp3pvRAYdFXLPTpLuCWcyxW9vCQHmmJ25PQAAEk/QUy+sZbCdY5irB0Do6HKup6EUXArUUqqWYKoJJOAB3q9d6U1luSe7tvtCD57cMxZfbONufYGgChRXSXuiC8/stLR7WCaayQrE2VaZucngYz7kjNZFrpktzFNM8kdvBCQryzEgBj0XABJPHYUrhYpUVrr4cuSZS9xbxxRrG4lZm2urnCkYUnr7VHqOhXGmQmSaWGQLMYXETElHxnByB29M0XQWMyitS+tGg0W0dWs5oXkcLNCjCQnjIYsBwO1SR+HLiRrZPtNqst1EJYImdtzg546YB47kUXAx6KUgqxDDBBwRVmwsJdSuTb25QSbGdVYn5sDOB78UwKtFXP7Nn/sxL7K7JJvJROdzHGcgY6dqsTaDcQrOPPt5J7dN81ujEvGO/bacd8E0roDLoq/b6TLPp325p4YbcSmJmkJ+U4znABz17ZPtSxaRJL9oc3FukFvt33DMSh3fdxgEnP0+tO4GfRUtxCIJdizRzLjIeMnB/MAj8RRbwNc3UUEZAaVwilugJOKNxEVFalzoM9tFdMLi3mezbE8cbEsnOM8gAjPoaSDQ5pY7dpLi3t3uv9RHKzBpBnGeAQMnpkildDsZlFX7fSZ5hctK8dtHakLM8xOFYnAGACSeD0FVbiEQS7FmjmXGQ8ZOD+YBH4indARUU5EaR1RAWZjgAdzXR6VoYgvrtLuS0nkhtZDJByzRtt4PIwSD6E4pN2VwWrsc1RWnBoc0sdu0lxb273X+ojlZg0gzjPAIGT0yRSRaJO1nJczzwWscU/kP5xbKvjPQA/pTugM2itVfD922pT2ReFXghMxcv8rJgHIOPQ1Bd6XLawwTJLFcw3BKxvCScsOowQDnn0pXCxRorcl069g02exjmtd8P766giZjJgf3jjaQvoDxmqtvok08UDvcW9u1ycQRysQ0nOMjAIAzxk4ougsZtFX7fSZ5hctK8dtHakLM8xOFYnAGACSeD0FVbiEQS7FmjmXGQ8ZOD+YBH4indARUU5GCyKzIHUEEqScN7cV0s2laVb2r6zxJYyxj7Nalzu805BUkHOFxn34pN2BanMUV1c2hWLw6XJDEUURJLe/OTlShbPJ4+4w49qZrGkWFtbavJbW/lm3lgEXzsdgZckcnn8aXMkFrnL0UUVQgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKALFx/qLX/rkf/Q2qvVi4/1Fr/1yP/obVXoGFFFFAgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDRpQSCCDgjuKfDDJcSiOFC7t0Ap93Zz2UwjuVCsyhxhgwIPQ5BIrmNTYGrmCC4kkvo7qaaIxqEg2sc8ZdtozgdsnmuPrdl0q8ggMssOFUAsN6lkB6FlByPxFYVaU+pMtgooorUgKKKKANPQr22sL4z3UMchjUvGX35DgHaBggcnHXNSaxqVtdW9rb2tvCqRRgl1MmQ7cuBuY8ZPfPTrWRUslrcQhjLBIgVgrFkIwSM4Pvik1rcaIq27prO/0vTYxqMEElvCySJKkmQSxP8AChHesSr8Oi39xDHJHCoEv+rDyqrSf7qkgt+AoYLcnluLaLw29glwk0wvBICisAy7MZ5A78U7WtQt7jWbe5tn82OOKIHgjlQMjmshgVYqwIIOCD2pKOtw8jW197W71Ke+tLyOVZ5Nwi2OHXI75XH5E0zWryG7ax+zybxDZRRPwRhgDkc1mVPPZz20MEs8e1LhN8ZyDuGcZ46UWSSQXu7m4NXS4s7Ix3draTWsQiYXFmJCdp4ZW2MfwOOaZbaystpeW1xcwpLLc/aEuLi1WRHOMHK7W2nocgHvWNDbedDPJ50MfkqG2u2GfnGFHc1BRZAX9Vu3upog91HciKMIrRQiJVGTwBgcfgKoUUU9gLc8dkum2j28ztdsX+0RkfKnPy447j3NVKKKANTRb6axaU22pLZM4AYSxF0ce+A3P4d+tO1e+tJtcS6so1CKEL+WmxXcfeIHYGoNO0o6mdkN3bpNhiIpN+4gDJOQpH61Qpdbh0NbX3tbvUp760vI5Vnk3CLY4dcjvlcfkTTNavIbtrH7PJvENlFE/BGGAORzVK6tZrK4MFymyRQCVyD1GR09jUNCStYL63NzSms4dLvo59Rt45LuFUVSkp2kMDzhCO3bNQyXFvH4bexWdZZhe+YNithl2YyMgd/Xmqd5YS2ItzKyH7RCsy7SeFPr78VDBF51xHFvSPewXfIcKuT1J7Ci1wvY6KbWbJtdL+aTbT2ItZJFQ5QlACcHrgiopIoLfwTOsVytwWvUyyKwX7p4G4A59eKxQ8ljeEwyqXiYgOh3K3bj1B/Wn3Wo3N5GkczqI4ySsccaxqCep2qAM+9K19v61uPb+vKxVroUnstRl0mWS68iS1RIZIijFn2twVIGOc9yMViz2c9tDBLPHtS4TfGcg7hnGeOlRI7RyK6HDKQQfQ1RL2On1ee1mk1TT7i5W2kGoGdWdGYMMEEfKDzVHXJ7PU9ZRra7RIBAiebKjgZC4wQAT+lZNzcS3dzJcXDb5ZGLO2AMn8Klu7CWzhtpZWQrcx+Ym0ngZI59+KlRslf+tCm7t/11NDxDJaXd0Lm0voZgIo4/LCSBshQCeVAxx61i0UU0rCOjGrpcWdkY7u1tJrWIRMLizEhO08MrbGP4HHNVrHVbiK/u7iLVlt5Z3y7TQZSUZPJChsH8O55qodKJ0uS+hu7eZIiokRN4ZS3QcqB+RqhRZXDoa2r31pNriXVlGoRQhfy02K7j7xA7A0a+9rd6lPfWl5HKs8m4RbHDrkd8rj8iayalt4GubqKCMgNK4RS3QEnFFguRVrabc2x0e/sLmdbdpzG8cjqxXKk8HaCR19Kzrq3e0u5beQqXicoxXoSDjioqN0GzNzTtQhh0u405p7eNvPEsc8tv5sbcYIwVJHYg7fXpVLVbt7qaIPdR3IijCK0UIiVRk8AYHH4CjTtKOpnZDd26TYYiKTfuIAyTkKR+tUKLah0JbWc2t5DOBuMUiuAe+Dmr+qrZXN3cXttfKRMxkEDRsJFJ5weNvHqDVK6tvss3l+dDN8obdC25eRnGfUd6go3A6OLVbNdc0S4M37q1t40mbaflIzkdOevao7TVYfsV5ZmaGEvc+fFLPbiVD1BBBUkdiCB61gUUWA6U6xGbC7gur6OdykKReVb+WuFcsQAFHAHqBRrOq2V7Y30UFwC02oiZMowymzG7p69utc1RS5V/Xy/yC5u3P2J/D9tZpqls0sEskjfJLhgcYA+Trx3qaLVbNdc0S4M37q1t40mbaflIzkdOevaucqeG286GeTzoY/JUNtdsM/OMKO5p26h5Dbl1ku5nQ5VnYg+ozUmn3jWGpW92nWGQNj1GeR+VNtLOe+mMVrHvdULkZA4AyTzUFNaaA9Todc1e0OqWf9kfPZ2beYgIK7nLbm6jPoPwp97q6vNdXNnqFsiXCt+6Fgomw3VS2zH1O73rm6KnlVrDu73NM3kP/CKizEn7/wC2mUpg/d2Yznp1pdFvprFpTbaktkzgBhLEXRx74Dc/h361l0VQjS166tLzVDLYoqoUUOUTYrvjlgvYGq2nSpBqdrLKdqRzIzHGcAEE1AiNJIqIMsxAA9TUl1bTWd1Jb3KbJY22uuQcH6ihaA9TZXUrQS6+TLxeBhB8p+fL59OOPWl+1WF62l3E92LZrONY5YmRizBTkFSBjn3Irn6KSVgbubttrMv9qX13a6gtg1zIWKSxF0ZSScHAbkfT15qpr11aXmqGWxRVQoocomxXfHLBewNVLSznvpjFax73VC5GQOAMk81BRZILsmtZ/st5DOBu8qRXx64Oa6KC80uHVtQv/t+VuoZRHF5T7lZx0bjHXjgmuXooauC0Og+1WF62l3E92LZrONY5YmRizBTkFSBjn3IqPUNVgvdIulB2zT6ibgR4PCFT36Vh0UWC51E+r2L6ndSrPlJNM+zqdjcybQMdPbr0qiupww6Fpscbb7i2u2maMgjjjHPTtWLRRb+vncP6/Cx0l7q6vNdXNnqFsiXCt+6Fgomw3VS2zH1O73pBq6XFnZGO7tbSa1iETC4sxITtPDK2xj+BxzXOUUcqC5tWOq3EV/d3EWrLbyzvl2mgykoyeSFDYP4dzzVfXrq0vNUMtiiqhRQ5RNiu+OWC9gazaKLILj4UR5kWSQRIzAM5BIUeuBzXSS6zp10ZdIf91pKxhbaXYS0brk+YccncSc/WuYooauGxtanq5KwRafckxtYxW8+FIyV6jkfqK0r/AFLTr+HVYUvo4vtEkDRtJHJghVweikjn2rk6KLX/AK+YXJ7m3jg2+Vdw3OevlBxt+u5R+lQUUUwCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/UWv/XI/wDobVXqxcf6i1/65H/0Nqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBo1vajs/tvS/Mxs8i33Z6Y4rEikaKRXQKSvQOgYfkeDVi71O5vkVbkxNtAAKwIpAHQZABx7Vz3NDeXyv7b1PPneb5Vz9o342bf4cd/T9K4Wt2XVbyeAxSzZVgAx2KGcDoGYDJ/E1hVdMJMKKKK1MwooooA1vDlmLzVo1kit5YgR5gmm2YXqSBuBJAB9R61qeIpiNKj8y1sle6ke4k8u43MCThWADnOQPQjntXNQXEtszNA+wujITj+EjBH5UXFzLdOrTtuKIsa8AYUDAHHtSauxrQiroYLrTtWNlaapBc29zHGkEU8DAgj+ElT9e3WuerQi1u/gSNY5UzEu2N2hRnQegYjI/A0xGibX+ytJvp2jiuLuO9+zGSWMSBQASTtYEZJHU0s9rbnXdEkEEaC8WGSWEL8uS2Dx0wcdKx7fUrq183ypAwm5kWVFkVznOSGBBPvQ+o3Ul+l7JMWuEZWViB8u3pgdMDHTpSSaeo3sXNTvVi1C6t4LW2SKKdvL/crlSG9ccg+hyPar+u3839kaSNlv++tTu/0aPj5j935fl/DFc7LK88zyync8jFmOMZJ5NWRql0LFbRmjeFQQgkhRymeu1iMj8DStokO+ty9pZWfQtUSWGFvIhVo3MK71JcfxYz+tSaVb28eg3F88lqk/nrCr3UZkVBtzwoVuT7jtVC31m8tbcwQfZ1jZdrA2sTbxnOCSuT+NRw6ndQSSvE6KJv9ZH5SeW3/AADG39KbT1ET62bF7mGSweJy0S+f5KMqCTvtBAwDwelZtTXN1LdyB5yCQMAKoUKPQAAAVDQtAZfupN2j2KfYPJ2GT/StuPPyfXHO3p1NUKsS3txNZwWssm6G33eUu0fLuOTz1P41XpgbPhX/AJD6f9cpf/QDWNUttczWdylxbSGOWM5Vh2pbm6ku5fMmEYbGP3cSxj8lAFLrcC0Z21nW4WutqedJHG2zgAcL39q2GSG61PVtOezghgtoZTCUiCtGU6Etjcc98561zAODkdavTa1f3ELxyzAiQBZGEah5AOgZgMt+Joa00Bbm7d3XlzaFAbSCZJbWJX8yIMXBOMAkZH4Y61nW0aWXi82USQywG8EJEsSyZXfjHzA447iqya/qSJCqzqfIQJEWhQmMf7JIyD7jmjRzAmpQ3l5epCIZlkZWV2d8HPGAR+ZFCWtwe1i9YWVrN4m1BZ1jEVsJpUjcHZlScAhecDrgelR389k2mxyLPZS38c+V+zWxRWjx0ZSiqcH26Gs6S/kGrS31o7Qu0rSIQeVyTx+tJc6hcXaBJTGEzu2xQpGCfU7QMn61KTshtq7NvXb+b+yNJGy3/fWp3f6NHx8x+78vy/hiuaq4NUuhYraM0bwqCEEkKOUz12sRkfgap1SVhdDZsljtfDc9+kMUtyblYQZYxII125ztIIyemTW29vb31xpsl1FFGkemNOImBCFgSeQMnbznA7VylpqFzZLIsDrskxvR0V1bHTKsCKll1rUJrqG4kuW86BdsbqApUenHbn8uKTTf9eQL+vvLmpSWM2kqftFnJfLNx9kgaIGMjuNijIP86xatXOoXF2gSUxhM7tsUKRgn1O0DJ+tVaaVgZs2P/Io6r/11g/maTS4Vh0ya/uHijiEoiUm2Wdy2M4CsQoGO5qhaahc2IkFs6hZRtkR0V1YdeVYEGnwapdWyyrE0eyZtzxtCjIT67SCB+Ao7gXvEdtBE1jPbJsFzbLI2IhHuOSM7QSBkY4HFUdJ/5DVl/wBfCf8AoQpt7qN3qLRm8mMpjXYhIAwM5xxUEMrwTJLEdrxsGU4zgjkU46CeqOonKahrOtWlxawJHEk0iOsQDoynIJbGTnvnPWobKGGyGnQ3ZhL3YVxCtikxZWbA3OxBBP8As9KyrjW9Quo5VmmU+d/rWWJFZ/YsBkj2zSQ61fwQxRxzKBDxExiUvH7KxGR+BqUrIpu5r6bbR2fjm5t4BiOPz1QZ6DY2BXOwytBMsiBCy9A6Bx+RBBqb+0bsakb8TEXRff5gAHP06UNqM7XQuGS3MmMY+zR7T/wHbgn3xmhJoGXvEscUWsgRRJGphiYrGgUZKAngcVo38NpfWFzNoktm0EMQd7VrUJLGOOd+MsQffFYl5q95fgfaWhZhjDrbxqwx0+YKDRJq97LBJC0ihZBiQpEitJ/vMACfxNFnYL6m2kVjp9tpgeSwVJolmuPtEDSPICTkAhDtAAxwQc1zt6sC304s3324kPlMQeVzx19qlg1W7t7dYEdGiQkossSSbCeu3cDj8Kqu7SyM8jFmY5Ynuadtbi6FvSJLOLVYX1NN9sCdw25A44JHcA4OK1r7T1nexlW4s7mzuLgRCa2txAy8jIKgDse+awYLiW2mEkLbWHHQEEehB4I9qludRuruONJnURxklI441jVSe+FAGfejqmBvMkN1qerac9nBDBbQymEpEFaMp0JbG4575z1qjpZWfQtUSWGFvIhVo3MK71JcfxYz+tVJtav7iF45ZgRIAsjCNQ8gHQMwGW/E0W+s3lrbmCD7OsbLtYG1ibeM5wSVyfxpWdh31NLwhcvHqE0SrEV+zyvlolLZ2/3iM49s4rEuLl7qQPIsSkDGIoljH5KAKfDf3FvfC7gdYpgSQURVHPH3QMY9sUy5uXupN8ojBxj93EsY/JQBTtrcXSxJpiLJq1okihladAysMgjcOK2ktYDL4l/cR4gDeV8g/d/vMcenHpXOKxVgykgg5BHatGXX9SnimjknXbcDEu2JF8z3JA5Pv1okm9gRuwJbjVNEsvsVqYrq1j8/dCpZyc856g+4rlLiMRXMsa9EcqPwNWF1W8W5trgTfvbVAkLbR8oHQdOeveqru0kjO5yzEkn1NFtbh0LOlzvb6jC0YjJZ1U+ZGrjGR2YHB9+ta2vyteeLJrKbykiN0F3rCisATjJYDJ69zXPg4OR1q1eandX4H2to3bIJfyUVzgY5YDJ/E0+qYdGb98NMiuNQtJ5bCOGNHSCOKB/NR1+7l9nPTnLEc0vhuyg1PTXa708SmycvC8YVTcHGfKb+90z9KwpdYvp4yssqsWXY0hiTzGHTBfG4/nTDqd55NtEs5RLVt0QQBdrevHU+5qUnYdzb8NX0r6zdZht4w0MzlVt0G07eg4yBx06VU0VY9U1WSS/W3229u8oQRCNGKjjcEHI5ycDPFZ41S8GpnUFl23TMWLqijJPXjGOfpSf2jci8S6jZIZk+60Eax4/BQB3ot+QrmhqUljNpKn7RZyXyzcfZIGiBjI7jYoyD/OsWrVzqFxdoElMYTO7bFCkYJ9TtAyfrVWmlYGFFFFMQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAFi4/1Fr/1yP/obVXqxcf6i1/65H/0Nqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBqwtGsoaaMyIOqhtufxq9rVvBb3UH2aIRLJbxyFQxIyRk9STVCJFkkVXkWIHq7g4H5An9K09be2uGgltryKXy4I4iiq4OQME8qBj8a5uhr1EuobVtAhure38lzcNGTvLEgKDz279gK5muqkNofD0doNQgMyTNKRsk5BUDGdnXj6e9crWkN2TLZBRRRWpAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBYuP9Ra/wDXI/8AobVXqxcf6i1/65H/ANDaq9AwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAasMMlxKI4ULu3QCpLmxuLS4WGaPEjgMoVg24HpgjOar1r68xW7s2UkEWkJBHb5a5jUqy6RewpIzxKfLGZFWRWZB6soOR+IrBrrLOMaPYvfXhInuYmS3g7kMMF29vT1rk60huyZBRRRWpAUUUUAFTNZ3KEh4JEw4Q7kIwx5AOehrQ8OWYvNWjWSK3liBHmCabZhepIG4EkAH1HrWxrUxFnbeZa2SvdTm4k8u43MCWwrABznIHoRz2pX1SDo2YU2h3tu7pObWN0+8jXkIYfhuzVVLOd7GS8WPMEbhGfI4J6DHWtnxJJp41+/D2tyZvMPzi5ULn127M49s1LZ38yeC7tglvmO4jRc20ZBGD1BXk+5yalSfLf0Ka1sc1RW1pyBLC41K5eGKMzCMH7IkzFiM4VDhQMf/AFq2lsrNbxblbOOUS6S8/lvAEDODw2wEhcjHSm3b+vmJK/8AXyOLoroI4YtV0aCe4jhglF8tuZIo1jDIwychQBketWr4aZFcahaTy2EcMaOkEcUD+ajr93L7OenOWI5pt2BK5ytWrLTrrUZNlpFvOQMlgoyegySBk1VrR0D/AJGLT/8Ar4T+dUJ6IoSRtFK8cgw6MVYehFNqzqP/ACFLr/rs/wD6EarVKd1cb0dgoq/dSbtHsU+weTsMn+lbcefk+uOdvTqaoUwL+naUdTOyG7t0mwxEUm/cQBknIUj9aoVs+Ff+Q+n/AFyl/wDQDWNS6h0Jrq1msrgwXKbJFAJXIPUZHT2NQ1fedtY1qJ7rbGZnSNigwAOFzz7Ctu+GmRXGoWk8thHDGjpBHFA/mo6/dy+znpzliOaG7AtTlantLOe+mMVrHvdULkZA4AyTzXSeG7KDU9NdrvTxKbJy8LxhVNwcZ8pv73TP0qLw1fSvrN1mG3jDQzOVW3QbTt6DjIHHTpSbtcEr2OZorRsJTfa/Y/aY4SrTxqyJCiKRuHVVABqe/kE+qz6dbWtuiG5McWIwrKd+PvDnB9Og7dKryAx6K66G2s7ie/0+QxzPBbyEiOxSNY2UdRIG3nB45HNZt6yaVY6fHawW7/aLcTSyywrIXJJ4BYHAGMcYqeYdjKtLOe+mMVrHvdULkZA4AyTzUFdF4SunXUZ41SEKYJX5iUkHb03EZx7ZxWM19K90s5S33qMAC3jC/ioXafxFO+thdBt1bfZZvL86Gb5Q26Fty8jOM+o71BW9rFrC/ie3gWNIY5lgDCNQgG4DJwOB1q0yQ3Wp6tpz2cEMFtDKYSkQVoynQlsbjnvnPWlfT+ugWv8Ah+Jy9FdfAluNU0Sy+xWpiurWPz90KlnJzznqD7iuUuIxFcyxr0Ryo/A0762DoR1aSwlfTJL4MnlRyLGQSd2SCfy4q34ft4Z72d54lm+z20kyRN0dlHAI7jvj2rTtn/tLwsVnjih36hFG0kUaxggg9hgZGfSh9vT8w/r8Dl6K6q+GmRXGoWk8thHDGjpBHFA/mo6/dy+znpzliOaj0hLG80+2tLSe0t9QZmDpdWok84k8Ycg7RjjAwaXNdXBqxzNWrKwlvzOIWRfIhaZtxPKr1x71DMjR3EiOoRlYgqDwDnpWz4WbZdX7GMS7bGU7D0bpxTvpcLa2MKit7yRquhRzmGCO6F4tujRxrGJAwzghQBwe/vWhDbWdxPf6fIY5ngt5CRHYpGsbKOokDbzg8cjmk3YErmAdKJ0uS+hu7eZIiokRN4ZS3QcqB+RqtawfabqOHzY4d5x5krbVX3J7Vp2P/Io6r/11g/mab4ZYNr1tbyRQyxTSBXWWFXyPbIOPwp9WLoZLDaxGQcHGR0NJWjp72UOvK2oputVdgw25A64OO4BxxWjqGnrObKVLmzns7i48oT29uIGTkZBUAdjnnNCew3uznaK6q+GmRXGoWk8thHDGjpBHFA/mo6/dy+znpzliOa5WhO4NWJ7SznvpjFax73VC5GQOAMk81BXQ+ELl49QmiVYiv2eV8tEpbO3+8RnHtnFQ6KseqarJJfrb7be3eUIIhGjFRxuCDkc5OBnihuz/AK8w6GJRW1qMljLpSt59nJfJNx9lt2jUxkdxsUZB/nWtcW0Mfhv+2V0uNbyWJY2QopjjU8ecE7ZxxxjPNK9lcLanLJZzvYyXix5gjcIz5HBPQY61BXS2d/Mngu7YJb5juI0XNtGQRg9QV5PucmodNig/sW61GR7SO4a4EStcQlkQEFjhFUjJ9xgY4p33/rsHYwKK33l0Vdes5nMUtuYh9pEMTBBJgjIUgcZwcD3+lM1y1xZw3cM9ndW0kjIstvbiFlIH3WUAfrmi4WMOiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCxcf6i1/65H/0Nqr1YuP9Ra/9cj/6G1V6BhRRRQIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1IpGikV0Ckr0DoGH5Hg1auNVurooZzCxjxtIt4wRjoMhent0qtC0ayhpozIg6qG25/Gr+s29vbXlv5EPlpJbxyMisTyRk4JzXMakc+s3lyzPcfZ5HcYZ2tYix/Hbmufrq47OKbT7iW50/7FGsW+G4LOPMbsvzHDZ9gK5StKfUmQUUUVqQFFFFAEsFxLbMzQPsLoyE4/hIwR+VLNdzTyxySvueNVRDgDAUYArQ8M6baat4gtbW/vrayhaRNxuBKRJ8wGweWjEEgnk4HuK3PiV4a0nw74v1S20bUbMwxXRjTT4vtBlt1x/E0iBTj2dutJuzX9bf8ONa3/r+tjnptcvbiRpJxayO/LO1nCWP47agtNRubKORLd18uXG9JI1dWx04YEV0Vz8P7yxhsX1DV9KtDqNnHd2aSyyAzB1yE4QhWHAJYhckAMecN03wDfX9np01xqWm6bLqpI0+2vJXEl1ztBAVGCgsMAuVBPtzRotA13MGDVLq2WVYmj2TNueNoUZCfXaQQPwFaem+IJ/tE82oXbeYtlJDA23kMeQOB6+tO0/wbqF2mpTX81tpFrpcvkXdzfswVJSSBGAiszNweFU4xziqfiDw/eeHNQjtr1opVmhS4t7iBi0c8TDKupIBwfcAjByKXuv+vL/IdmVLrUbm8jSOZ1EcZJWOONY1BPU4UAZ96kl1i+njKyyqxZdjSGJPMYdMF8bj+dM0vTLvWtVttN02Hzru6kEUMe4LuY9BkkAfia7Sb4H/ABDt7eSabw9tjjUu7fbbc4AGT/y0puyV2JXbsjgKs2V/Pp83m2pjEmQQzxK5UjuNwOD9KrVt6J4XudZ0+71F7u007TbMqs17eswjDtnagCKzMxwThVOAOcU+lxGXd3kt7N5s/l7+5jiVM+52gZPvUFdVD4MNj4wstL1zUbGC3uVinhuSZnhvInYY8sohb5gT94LjBzg1Y+JXhrSfDvi/VLbRtRszDFdGNNPi+0GW3XH8TSIFOPZ260rpWXr+A9Xf+tzlZb24ms4LWWTdDb7vKXaPl3HJ56n8ar11lz8P7yxhsX1DV9KtDqNnHd2aSyyAzB1yE4QhWHAJYhckAMecN03wDfX9np01xqWm6bLqpI0+2vJXEl1ztBAVGCgsMAuVBPtzT2dv6uHQ5q2uZrO5S4tpDHLGcqw7UtzdSXcvmTCMNjH7uJYx+SgCtvT/AAbqF2mpTX81tpFrpcvkXdzfswVJSSBGAiszNweFU4xziqfiDw/eeHNQjtr1opVmhS4t7iBi0c8TDKupIBwfcAjByKV0FmZVXpdYvp4yssqsWXY0hiTzGHTBfG4/nUemWEuq6taafbsiy3c6QI0hIUMzBQTjPGTXTal8ONQ09tWgj1TS76+0dWkvbG1kkMsaKcM43IFYDIJCsSM8gc4HZbgtXoc0dTvPJtolnKJatuiCALtb146n3NA1S8GpnUFl23TMWLqijJPXjGOfpWppHhePVltlPiDR7K4u22w21zJKXYk4GSkbKmT/AH2X16VJpfgfWNV1rV9JjWCC90iCWa5inl2/6tgrKGGRnJ6kgdeaNL/f/wAH/ghv/X3GK1/O15HdDy45YiGQxwogBByDhQAfyqKSeSW4ad2Pms5csOOSc54roLbwVdalrVlpui6lp2pveCQiW3ldUi2Dc+/zFUjA5zjB7ZqjqWhx2bRCw1jT9XMknlbbHzdyt2G2SNCc9ioI96FurAMPiHUy0jCdVaVSsjLCimQEY+YgZb8agh1W7gtlt1dGiUkossSybCeu3cDt/Cuhvfh3qVlFfoNQ0241HTIPPvtNgldp7dBjcSdnlsVyNwV2IpfC2n20Hg/xJ4ivLaK5a0jjsrRJkDqs0xIMm091RWIz3IPaleNm1/Xb8Qs7pf1/VjmLa8uLS7W5t5SkykkN169c56086hMboTlLfeF24+zR7f8AvnbjPvitrSfBVzqnhWfxFLqenafpsF0LWSS7eTcHKhhhURiQc44BPtgZqHUfCN5pWvQ6bfXdjEk8K3MN8Zj9nlhIyJFbGSDg8Y3Z4xmnonb+u/5B0uZ95q93fj/SjCx4w628atx0G4KDj2pZtav7iF45ZgRIAsjCNQ8gHQMwGW/E1p3nhB7bSoNVt9Z02+0yS6FpLeW5mC28hGRvR41kxgE5VT0Pfiui8ZeDNB0nwv4dvNP1nTYp7nTmml4u2N84cgMmYiF6Yw2zn86Tsl/Xa41dv+u9jh11W8W5trgTfvbVAkLbR8oHQdOeveqru0kjO5yzEkn1Neoa74CTW/8AhE7fRrjSLC9vtBgeO1kJjkvZfnLH5UK7jgDLlcnucVyvgCCzn8dWek6zbRS22oubCUSoC0Rk+VXUn7rK2CCPTHenu2lvr/XzFtHm6aHOW11NZ3Cz20jRyJ0YVZuNYvbm0NrLIgt9wfyo4kRQR3woGOtQ39nJp2pXNlP/AK22meF8f3lJB/lUKIZJFRdoLEAbmCj8SeBQrSV0DvF2LkusX08ZWWVWLLsaQxJ5jDpgvjcfzpLfV721RFhkQFOEdokZ0/3WIyPwNaw8MKtoJJpowy2plf8A0qIAOTiMdehGDnoexrnSMEg9vQ0abBqDMWYsxJJOST3qxZX9zp0zS2UpidkKFgAeD1HNPs9Oku4ZZzJHBbxEB5pSdoJ6AYBJP0FQTxCGUqsscy4yHjJwfzAI/EU/ICa41O6uljWWRVSI7kSKNY1U+uFAGferB8Q6mWkYTqrSqVkZYUUyAjHzEDLfjUerw2yas8Wm7Whwmzy23gkqM88981LNoNxCs48+3knt03zW6MS8Y79tpx3wTS0tqGpUtNQubESC2dQso2yI6K6sOvKsCDUlpqt1ZTtNbeSkhbfu+zxkqf8AZyvy/QYp6aSxsobm4ure1SfPlCUtl8HBPyqcDPrirfh3S7W+vJkvJoTsikIiJfOQvDZUYwPr+FDtqwM99TuXuVnzEkigjMcCICD1yAAD+NJdajc3kaRzOojjJKxxxrGoJ6naoAz71HcQpBIFjuYrgYzviDAD2+YA0yOQxSrIoUlTkBlDD8QeDRoGpbl1i+njKyyqxZdjSGJPMYdMF8bj+dUa2ta2PpOk3HlQxyzRSGQxRLHuIfA4UAdKr2+iTTxQO9xb27XJxBHKxDSc4yMAgDPGTigCna3c9lcrcWshjlTowGf0PWpP7RuReJdRskMyfdaCNY8fgoA71BLE8MzxSqVdGKsp7EdqmsbGbUboQW4XdgszMcKqjqSfQU9NwHXGpXNyqrIYgobdtjhRAT6kKAD+NSHW9RN7JdG5Jlkj8p8qu0pjG3bjGPbFaB0yOPwrNJE1vdyPdxpHLCCT0OV+YBh27VUm0GeETqJ7eWe2XfNAjEug79sHHfBNTpsPUq2mo3NlHIlu6+XLjekkaurY6cMCKINSuraSVoXVRN/rIzGpRu/KEbfpxxUyaSxsobm4ure1SfPlCUtl8HBPyqcDPrimWmmSXUc8pmhhgtyBJLIxKgnoBtBJzjsKeghh1G6N0tx5gDqu0BUUKF9NoGMe2KLrUbm8jSOd18uMkrHHGsagnqdqgDPvTWtkW6ERu4NjDInG4p+QG79Kta1bSw6oIXjtw5jTaLVSFYFRg4Izk9/ejQDNorUm0G4hWcefbyT26b5rdGJeMd+20474JqK30mWfTvtzTww24lMTNIT8pxnOADnr2yfai6CzKFFSTw+RO0e9JNvR0OVYeoqWxsZtRuhBbhd2CzMxwqqOpJ9BTArUVvPp0UHhOedZLa5Y3SKk8YORwcr8wBHaqS6O0scptry1nkhQyPDGzbgo6kEqFOPYmlcLGdRWxH4cuJGtk+02qy3UQlgiZ23ODnjpgHjuRVS00yW6inlaSK3ht8CSSUnAJ6DABJPHYUXQFKipbiEQS7FmjmXGQ8ZOD+YBH4imxyGKVZFCkqcgMoYfiDwaYDKK2ta2PpOk3HlQxyzRSGQxRLHuIfA4UAdKr2+iTTxQO9xb27XJxBHKxDSc4yMAgDPGTilcDNoq/BpM8iXEk7x2sVu/lyPMTgN/dwoJJ4ParEvhy7iP+ut2BtWugyuSCg/DqaLoLMyKKttpsy6bBe5Vo55GiRVyWyPbHvVmbQbiFZx59vJPbpvmt0Yl4x37bTjvgmi6Ay6K3IXF14Vv3mht98EkKxukCIwBJzyACenesOn1AKKs2NjNqN0ILcLuwWZmOFVR1JPoKsNo0pFu9vPBcQzzCFZYy21X9CCAR+VAGdRWpc6DPbRXTC4t5ns2xPHGxLJzjPIAIz6GsukmmFrBRVi2tluAxkuoLdVxzKW5+gUE/pTr6wksJI1kaORZUEkckZyrqe479j1ApgVaKciNI6ogLMxwAO5ro9K0MQX12l3JaTyQ2shkg5Zo228HkYJB9CcUm7K4LV2OaorSXRLl76xtQ8W+9jWSM5OAGzjPHt71QljMUzxtglGKnHtTAZRVzS2sxqCLqUe+3f5GIYgpn+IY9K230Sx0u6s7C823d3dXKZKuQI4d2Ox6sPyFHWwHMUV2dt4e01/EMpeAtYONkMe9v9Z8wIznJxsf9KwtVsre20rS5oY9slxE7SHcTuIbA+nFSpJjsZNFFFUSFFFFABRRRQAUUUUAFFFFAFi4/wBRa/8AXI/+htVerFx/qLX/AK5H/wBDaq9AwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAakSLJIqvIsQPV3BwPyBP6Vqaw9pcy28kN7HIqQxxOqI+4YGCRlQCPxrMhhkuJRHChd26AU+7s57KYR3KhWZQ4wwYEHocgkVzGpo2ctrpsV0xvUuPOhaNYY0cbiehbcAOOvGa5atpLC6ksJL1IibeNgrSZAwT/PrWLWsCZBRRRWhAUUUUAWdOuhZapa3TKXEEySFQcZ2sDj9K6j4j3Gk6z4q1DxBo2t215HqFx5otBDMk0QIyd26MJwRj5WNcdRSavby/4H+Q1pc6vx5rdjrUvh86bcGdbPQ7W0m+Rl2SoDuXkDOM9Rx710ieNLfUtE0FrfWdI0e+0m0S0lTUtES6dvLYlJIpfJkPQj5SVwwOOua8wop/53/P8AzF/lb+vuPSdL8cQ3mja3peo6pZw3d3qn9pQ6jqOkR3EM7FSrB4tknlseGBVT/EOM1y/jDWZ9XvrRZ9Wt9VWzthBHJa2C2sMagk7EUIhKjPUqOp4rO0bQ9R8QXj2ukW/2iaOF52Xeq4RBljliBwO3Ws+p5Vf+vQq7/r7y3pdxaWmq20+pWX2+0jkDTWvmmLzl7rvHK59RXaTeLvh49vIkPww8qRlIST/hILhtpxwcbecelcBRVNXVhLR3Cu88I+KbW28E33h25u7HT52vVvbe61DTVvYGOwoyMpSQoehDKh7g4zXB1oaNoeo+ILx7XSLf7RNHC87LvVcIgyxyxA4HbrQ9nf8ArqLqv68ja8QeI5rrxDpVxc6pb6ummJGiNaWK2kSKrlvLRQiEr7lR1PFT/Ee40nWfFWoeING1u2vI9QuPNFoIZkmiBGTu3RhOCMfKxrjqKVtvn+I7/wBeh1fjzW7HWpfD5024M62eh2tpN8jLslQHcvIGcZ6jj3rpE8aW+paJoLW+s6Ro99pNolpKmpaIl07eWxKSRS+TIehHykrhgcdc15hRT/zv+f8AmL/K39fcek6X44hvNG1vS9R1Szhu7vVP7Sh1HUdIjuIZ2KlWDxbJPLY8MCqn+IcZrmPF+sz6vf2aXGr2+qJZ2ywRyWlgtrFGoYnYihEJUZ6lR1PFc7RSSSaf9aKxV3/X3nZ29toNp8XtJh8JXs99pS6haeTPcKQ7EshbIKr0bI6DpXS6tf6D4W8beNdUj1hLy6vFvLODTlglEiSSsVcyMVEe1ecYZs8cCvLrK8n0+/gvLN/LuLeRZYnwDtZTkHB4PI70t/fXGp6jcX19J5tzcytLK+0Dc7HJOBwOT2pON0l6/jYE7a+n4XPT9L8YabBZeFjp/i2fw/Y6fEi6ppdpHOktzIr5dwY12Sbxj77DA7dqpN4t0b/hOvH+orfEW2safeQ2Mgif968jqVGMZXIB+9j3rhYdD1GfQLjWorfdp9tMsEs29RtdhlRtzk5x1AxWfTaTb+f4/wBaCTaS+X4f1qa3hm/k0vxDbXtvq0mjzwktFeJGZPLbBxuA52nocA8E8HpXb+KfHFlcweHrye50/W/EenX5ubjULGza2SWIFSsbFkQs2R12AAdO+fMqKfVPsLv5nqOveM4pr3V9U0PxLpVvBqUc3+iL4ejS9Ky5zC8gh2kc4L+aSeuCeKxPCc39p/D/AMU+HIz/AKUyxalbJnmTySfMUDudjFsDn5TXE1oQ6HqM+gXGtRW+7T7aZYJZt6ja7DKjbnJzjqBip5Uotf1vp+JV22v69fwO40ezsb74D3MN/qUemn/hIVMU00bvHu8jo2xWYcZwQp5x9au23jPw7B4s02FbvNrpegnTLTV5LVmEdzhmFwIyC20MxA4yOuK4LTbnWdVs7fwpp7GWC7vlljtQi/NORsB3Yz0OOuO9VbnTPsuvSaY97at5dwYGukZjDw20vnbkr3zjp2p2vL1/yt+ok7L0/wA7/od9r3iq1ufhTc6Jf+LrnxFrL6nFcB5DcPGsQRhhGlUHgnnIXqMZxmszX9R0jxJ4I8OrHrFtZX2jWMltNZXMUxaUhyylGSNk5B/iK4P51ymtaPd6BrV1peooEubWQo4U5B9CD3BGCD6EVRpWTV111/C35D1T/D8b/men2ni/Q4vH/gLUnvsWmkabbQXsnkv+6dN+4Y25bGRyARWL4KSC/wDixFqTvjT7G7fU7ic8BIY2Mm4/XAAHqQK45IZZVZo4ndVIDFVJAJ6fnTXR45GSRWR1OGVhgg+hFVs+Zb6/jqTurei+7Qs6rfNqms3uoOu1ru4knK+hZi2P1qG2eNLlGmjSRM/Msm7bj32kH8jUVFKKUVZDk3J3Z0uqa5YzWdzHa2sDGaYRgHzRiJFwjfexnnp7ciuaoooSsFzVs7m2m0SbTbmYWzecJ4pWUspOMFTgEjjuAaz5444pSkUwmAH31UgE+2efzAqKin1uBLazm1vIZwNxikVwD3wc1v3urq811c2eoWyJcK37oWCibDdVLbMfU7veubqeezntoYJZ49qXCb4zkHcM4zx0pNJ7gjc0TVxZwQxXOowtYgky2c9uXJ9QvBH6jntVPRb+1s9bklkzFbSpJGDgnywwIGQOuKyKKLICa5hSCTbFcx3AxnfGGA+nzAGoatXdhLZw20srIVuY/MTaTwMkc+/FVaYGvcz2t7oNjH9qSGezWRWikRvny2RtIBHtzirg1dLizsjHd2tpNaxCJhcWYkJ2nhlbYx/A45rnKKVgJrudrm9mmeTzWkcsXKhd2T1wOlXNEvYbO7lW6LLDcQPAzqMlNw64+tZtFFtLB1udDBe2OmaIIYrtbq4W9juNqI4UqvoWA/l3705r3T7a+1LUILvzjdxSLFB5bBlL9d2Rt4yehOa5yii1wudHomrizghiudRhaxBJls57cuT6heCP1HPaqemag9nc3L2OoLp4kbhJYy6MuTgHAbkfT8ayKKLa3DpY19WlstS1kvayQ20ZjXfIY2VGcDkhVBIyfarGr3dqdWg1GzvYbjyREPKCyKxKAZ6qBjj1rAooSsG50l7q6vNdXNnqFsiXCt+6Fgomw3VS2zH1O73rON5D/wAIqLMSfv8A7aZSmD93ZjOenWsyijlSVguFaWiXsNndyrdFlhuIHgZ1GSm4dcfWs2p7W3S4kKSXMVvxw0ocgn0+VTT30EbMdzptloP2Q3S3khvI5nREcKyAcgFgP6da0E1q2S9vpJdZeW1mhkS3tkWQLHkcArgAY6cZrmNQspNOv5bSdlaSI4YoSQfpmq1TZNepV7HRxarZrrmiXBm/dWtvGkzbT8pGcjpz17VV0/UZLW9upLPU1szK5/1sRZJFyeoAbn8O/WsainYRpa9dWl5qhlsUVUKKHKJsV3xywXsDWbRRQlYNzXuZ7W90Gxj+1JDPZrIrRSI3z5bI2kAj25xVwaulxZ2Rju7W0mtYhEwuLMSE7TwytsY/gcc1zlTw23nQzyedDH5Khtrthn5xhR3NFgNX7fBf6deWl5diOWS6+0pcSRkK5xgghQSD34FatxdWln9gjknIgn0p7cTlDwST82OuMj61x1Tz3c9zHCkz7lgTZGMAbVznH60nH+vlYd9f673Nia/tLTR9Ngtbhbme1ummcBGVT0IwSBxx9alvdXV5rq5s9QtkS4Vv3QsFE2G6qW2Y+p3e9c3RT5bivY1tNubY6Pf2FzOtu05jeOR1YrlSeDtBI6+lZbqEkZVdXAOAy5w3uM802in1uBpaJewWd3Mt2WWG4geBnUZKbh1x3q7b3tnp9na2i3S3BN8lxLJGjBUVeMDcASep6VgUUdbgb66laCXXyZeLwMIPlPz5fPpxx61gUUUkrA3c2tKvooNIuIIr0afeNKrC42t8yY5XcoJHPPvR4iv7e++wfZ7mS5aG3CSySA7i2Tk81i0UWu7hcmtZ/st5DOBu8qRXx64Oa6KC80uHVtQv/t+VuoZRHF5T7lZx0bjHXjgmuXooauC0Oos9R01tQ0e+uL0Q/Y4VikiMbFsrnBBAxjn1z7Vzly6yXczocqzsQfUZqKii2tw6F/R/sK6gsuqN+4iBfywpJlI6L+J9a101y21Oa2u9VkWG8tLpHVwhIki3ZK8D+Ht7VzNFPqB0Njrgj8Ro1xckafHczSp8p43A84xn0pl5JZahpOmRLqMEEltG6yLKknUtn+FCKwaKnlQX1JJo1imZEmSZR0dAwB/76AP6VHRRVAFFFFAgooooAKKKKACiiigCxcf6i1/65H/0Nqr1YuP9Ra/9cj/6G1V6BhRRRQIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA0a2tYiE+pWETSLEHtYVLucBeOprIikaKRXQKSvQOgYfkeDVi71O5vkVbkxNtAAKwIpAHQZABx7VzGp0LxM+iapDA0At4xEkIFzGeAxJJIbAJ68/SuCrXju5oraa3jfEU+3zFwPmwcisitKe7JkFFFFakBRRRQBueCreG68e6Db3USTQy6lbpJFIoZXUyKCCDwQR2rodVurPUPH9x4XTS9PtNMfWPs0bw2qJNCPP2sRKBuOQT8pJUZGAMCuKsL640zUba/sZPKubWVZoX2htrqcg4PB5Heku724vtQmvrmQvczytNJIAFy7HJOBwOT2p6Xjfp/wP8AINbNLr/wf8z1SSCw1bxX4y8NT6Jp1lp+l2V29k8Nmkc1s1v9xjKBvfdjncWzuquy2fh248D6XaaJp95b6xaQXN891ZxzSXTTSFWVZGG5AoGBsK88muNvvHfiLUrG4tbu/VlukWO5lS2iSa4VcYEkqqHkHA+8x6Umm+OfEOk2Vva2V8gjtSxtWltYpZLYt18p3UtHnr8pHPNRFNWv0t89/wA7r7ipO97ab/Lbb0s/vPQ/ATf8I78VPE2g6ctrJZWkOoeU8tpFJJ8ikAeYylscDK52nng5ryjU9UuNWuRPdR2sbqu0C1s4rZcf7sSqCeeuM0/S9c1LRdYTVdNu3hvkZmExAYncCGyGyGyCcg5zmm6nqlxq90Li7S1Rwu3FrZxWy46/djVQTz1xmkotWv2S/P8AzG2tbd7/AJf5Fnwvafb/ABVptr/Zn9redcIn2H7R5H2jJ+55n8OfXtXs978PfKsLiT/hR/kbYmbzf+Et3eXgfexu5x1xXgVFVJXVkTHR3CvS/grqtxb+Ir6zjjtDF/Zt3Nuks4nk3CLp5jKW28fdztPORya80q9o+sX+gapFqOkXDW13DnZIFDdRgggggggkEEYpvWLXdMXVPs0bXh28bxB8RvD41S2sXjkv7eF4YbGGCN0MoyGSNVU5yQcjkVp6xdWd/wCOrvwumm6dY6Y+r/Zo5YrWNJoB5+1m8wDcQQT8pJUcYAwK5iTxFqD63a6un2W3vLR0khe1soYFVlbcp2IgUnPcg571SvLye/v57y7fzLi4laWV8AbmY5JwOBye1C3jfpf9BvZ262/U9X8QL4TtNR8SaLqN34dtrK2hmg062s9OnF3BcRnEe+cwAuSQQ252HPHrSQ2nh/w1pfhRZ7rw7Hb31nHe6kNTsJbm4uQ7EMqOsLiMKAVGxlOQSfWuCu/HGv39s8V5dxSvJF5Mly1pD9pdMY2tPs8xhjjluRUdh4w1rTtNi0+G4gmtYWLwR3dnDciAnkmMyIxTJ5+XHPPWoUWlr5fPf/P8Bt3/AK9P6+ZFf6ZFfeLbyw8IxXGp2zXEgsVhhd5JIgSVO3G7O0ZPHY1s/DfTLO+8QX0+o2qXg0zTbi+is5RlZ5I1yqsOpGTkjvt9M1h6X4k1bRfES67p140epo7uLhkVzuYEMSGBByGPUd6Xw7qM2neJLW+i1R9KlRyRepF5nlEgjJUdVOcEc8E8HoaSajby/EUmm7+Z3+mwWfiz4Yi41PTdOtLuTxFa2TahaWUVu3lOpyMIAoxnsBnjOcVa8QL4TtNR8SaLqN34dtrK2hmg062s9OnF3BcRnEe+cwAuSQQ252HPHrWH4m8XQv8AD1PDseq2mqXM2oC7kfTrH7LbQIqkBVTy48sxYkkIOg5Nc7d+ONfv7Z4ry7ileSLyZLlrSH7S6YxtafZ5jDHHLcipabvb+tF+TuUna39dX+asdpofiK9h+BOsypBppa21K1hQPpds6ldh5cGMh24+82W96xvh3HY6heeK7vWdPtb1YdDubpYmhVVWQMhBUKAE6kfLjAPGK5rRvE2q6Db3Vvp00X2e72+fb3FtFcRSbTlSUkVlyM8HGajtNf1Gwm1CWymSBtSgkt7oRwIqvG5BZQu3CjIH3QMdsVTWsn3X6W/PUlaJLs/1v/wDsfBc1r4o1y6utX0fTppNH0q6vYoLe0SCO5dACiyJGAGCkk9Mnoc1NZ2Fl4w8GabqGqWlnZ3g8Qw6a09lax2wmhlXJBSMBdy44OBwe9cFpWrX2ialFqGk3L2t1CcpInbIwQQeCCOCDwR1q3q3ijVtat7e3vbiNbe2YvDb2ttHbxIx6sEiVV3HHXGadtV8vzu/vWgdH8/ysvuep6JJBYat4r8ZeGp9E06y0/S7K7eyeGzSOa2a3+4xlA3vuxzuLZ3VBofiK9h+BOsypBppa21K1hQPpds6ldh5cGMh24+82W964y+8d+ItSsbi1u79WW6RY7mVLaJJrhVxgSSqoeQcD7zHpVTRvE2q6Db3Vvp00X2e72+fb3FtFcRSbTlSUkVlyM8HGajlfLZ+X4O9/nsU2r3Xn9zVrfLc6b4UuLv4kG4lCC5+x3k0AijVAJfJcjaq4AxzgAcY4FcJnPWtPStfvNH8TW+u2nlLdQXHnhVjVEJzkrtUABSMjAAGDUNzd2M+vyXcdg8Vg9wZBZifJWMtnyw+304zj8Kq3vL0t/X3/gTfR/1/W34nVfFQA63okrgC5m0Gxe59fM8vHPvtC1w9aviXXp/EviK71a5jWJp2GyFPuxIoCog9goA/Csqhd31/UOy7W/A7fSLQW+n2qy2lhhpGuJWF2DlY1+Vv9Zg/MSDj5R3ArkdQlM1/K7xxRuzEsIXLqT3IJJz+dL/aN35Xl+b8nk+RjaPubt2OnrzVWi2tw6WNrw1HE91etNbx3Ajs5HVJFyMjGKmjhi1XRoJ7iOGCUXy25kijWMMjDJyFAGR61U0G/j06e7leUxO1pIkTAE/OcYHFVLrUbm8jSOZ1EcZJWOONY1BPU4UAZ96Ov3fmHT+ux0F8NMiuNQtJ5bCOGNHSCOKB/NR1+7l9nPTnLEc1Rt2itvCIuhbwvcfbiiySRhsDYD0I5+h45qjLrF9PGVllViy7GkMSeYw6YL43H86r/a5/sIs9/wC4Enm7MD72MZz16UknYd9TrtPFtcWdg72Fnm4iuXkHkLyUGR2yOewqEafZz6naTzRwIDpf2p02bY2cA8lVHTuQB2rnodWvbeOFIptqwq6xjYp2h/vdu9IdUvTNbSi4ZZLVBHCygAqo7cdep60Wf9fP/gAn/X3Ghfz2TabHIs9lLfxz5X7NbFFaPHRlKKpwfboas67fzf2RpI2W/wC+tTu/0aPj5j935fl/DFYlzqFxdoElMYTO7bFCkYJ9TtAyfrThql0LFbRmjeFQQgkhRymeu1iMj8DRbQL6lOtmyWO18Nz36QxS3JuVhBljEgjXbnO0gjJ6ZNY1WbTULmyWRYHXZJjejorq2OmVYEVT2F1Ore3t76402S6iijSPTGnETAhCwJPIGTt5zgdqxdSksZtJU/aLOS+Wbj7JA0QMZHcbFGQf51Tl1rUJrqG4kuW86BdsbqApUenHbn8uKjudQuLtAkpjCZ3bYoUjBPqdoGT9amz/AK9R3/r5FWty3aK28Ii6FvC9x9uKLJJGGwNgPQjn6HjmsOpvtc/2EWe/9wJPN2YH3sYznr0qnsJbm5YpbvpF1qTfYoJ2nWJTPCXjjG3JIQKwyT6jAwcVJHb6Xd6t51v5Nx5Ni08sUSMsbzKOgBAOOhwKwrS/uLLeLdwFkGHR0Dq3plWBBpf7Su/tkd0s3lzR/caNQgUegAwAPaptrp/WgXLFrdG/1ayS4gt8GdARHAqAgsOCFABH1rSS1gMviX9xHiAN5XyD93+8xx6celYlxqFxclTIY12ncPKiWPn1+UDJ96sy6/qU8U0ck67bgYl2xIvme5IHJ9+tDTtoNGtPJHazaJBHYWrJcW8Rm3QKTLuODyRkH3GDQun2dhb6lMktqrxXptonuozIqKMn7oVsk46kdjVW+1+RI9PXTp1PkWiIxaEExvznaWGQenIrKttQurRpDDLxL/rFdQ6v9VYEGiz1+f5h/wAD8jVkXT5/EmmfZDDKsrRC4WOMrGX3YbCsBwR2xio7uSKfWpdOW3ghtzdeWrLEoZPnwTu6+vB4Has5tQuWvIrreBLEQYyqKoTByMKBgc9sVDLK88zyync8jFmOMZJOTTS2Ffc6e+GmRXGoWk8thHDGjpBHFA/mo6/dy+znpzliOao27RW3hEXQt4XuPtxRZJIw2BsB6Ec/Q8c1Rl1i+njKyyqxZdjSGJPMYdMF8bj+dV/tc/2EWe/9wJPN2YH3sYznr0pJOw76jZ5fPnaTy0j3clUGFB9h2pIv9cn+8KZRVrQl6m34iha48Y3MMYBeSZVUE8ZIArThtrO4nv8AT5DHM8FvISI7FI1jZR1EgbecHjkc1ztzql3eBPtEiuyYxJ5Sh+BgZcDcfxNTnxDqZaRhOqtKpWRlhRTICMfMQMt+NZ8r5bFX1uZlbHh6OB21FrmBJljsZHCuM4II5Hp9RWPU1vdz2olFu+zzozFJwDlT1HP0q3sLqaWnltVvgzx2kQt4nlkfyAF2Af3FwGI7evetB7Wy1PRYp1PzC+SAzi0S3+VhyMISDjg5Nc9aXk9jcCe1k8uQAjOAQQeoIPBHsamn1e9ubQ2skqi3LB/KSJUUEdwFAx17UrAWdZuRDf3VjFaW8UELmNFEK7xg4B343E/U1JpZWfQtUSWGFvIhVo3MK71JcfxYz+tUp9WvLmLZPIrkqFMhiXzCB2L43H86db6zeWtuYIPs6xsu1gbWJt4znBJXJ/GlZ2sO+ty7avHa+E3ult7eSf7aEEksSvhdmccitB9Msj4okLxxJEtl9qERBEe7YDyBzjPOBXOS39xLbNbsyiFpfNKJGqjdjGRgccdhxT31W9e+jvDcMLiNQqOoCkADAHHtxQ0/69Bf1+Je1KSxm0lT9os5L5ZuPskDRAxkdxsUZB/nWLVq51C4u0CSmMJndtihSME+p2gZP1qrTSsDCiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAsXH+otf+uR/wDQ2qvVi4/1Fr/1yP8A6G1V6BhRRRQIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA1YWjWUNNGZEHVQ23P41o6ra28OoWqwRCJJYYnZAxIyw56kms2JFkkVXkWIHq7g4H5An9K1NYe0uZbeSG9jkVIY4nVEfcMDBIyoBH41z9jQn1aySGS7Fjp9q1vE2BLFO0joPUgOcfiK5Cuos5LTSxcyi8S5eSFokjiRxncMZbcAMD2zXL1dMUgooorUgKKKKANHQtCvvEWrR6fpiK0rKzs8jhEiRRlnZjwFABJNbOkaFZ23jLQohqmmazbzajDFKluJCP9YMqyyohII7gEe9M8Ca9ZaHrN2mreYljqdhNp880S7ngWQY8wL/FggZHpnvRp8Ok+H/FWjXg1+21CKG/ille1t5wscauCSfMRTnjooP17VUdJx7afmKWsX3/AOAa3jLwNJFq3ijUNKu9Mkg0y9c3FhaswktI2lKr8uwIQMgYRjjocc1Q0DR5ZvBWv6hZzaJdeVbKbmC5hlN1ar5oAeJtmwMTjox4J6VsReKtGW6+I7teYXWkkFgfKf8AfZn3jt8vy8/NioPCEmh2HhDxDa6h4n062udZso4YoWgumMLLKGO8rCR0H8JasI3ULeX466f13NZWc/n+Gmv9dg+FFwl94mTRb6x027sZLe5lZbjToJJNwhZgRIyFxgqDgNiuU8PeH77xNqy6fpix+ZsaWSSV9scMajLO7dlA/wDrZNbXgXVtO8KfEKG4v7xZ7BVmt3u7aNyoWSNk3hWVWIG7OCAan8LX+j+FfEt5bXerw32m6nps9jLe2UMv7jzBgMVkRGOCASADweMmtHvddvx1/wCAQu3n+Gn/AAS/ceGrLTvgxqOoR3GmapI2rwRxX9orFkGx90f7xFdexxgA8EZrHufh/eWMNi+oavpVodRs47uzSWWQGYOuQnCEKw4BLELkgBjzjSur7QNL+El54fs9di1LU7jVIroi3t5li8sIy8GRF5HfIHUYziszx5rdjrUvh86bcGdbPQ7W0m+Rl2SoDuXkDOM9Rx70ne7t3X/pP+ZStZX7P/0r/ITTfAN9f2enTXGpabpsuqkjT7a8lcSXXO0EBUYKCwwC5UE+3NJaeAr+XRbrVNRv7DSba0vzp8/215A0cwXONqIxI7cZPtjmumTxpb6lomgtb6zpGj32k2iWkqaloiXTt5bEpJFL5Mh6EfKSuGBx1zWRrHii11P4e6hZ3GoG61W68RNfsWt/KMsZiKmQhRsUlj90Ghtpu39ar9LijZ2v/Wj/AFsW9A8FxaR4g8TWXiiwttRk0rRJb+BBPJ5MjDy2Rw0bKxUq3TI69jVLUtFsNV+H9lr+naQulX82qGwS1t5JXjuwU3B0EjM2QcKfmI5HSupuvH+jxeLNZ1PTdWkhaXwotha3EUcqOLoLGNoIAKkFT83A461h2njW11Tw/Z3nie9kn8RaBfxXNjPOHkkvoN4LwNJg8qRuBY9yKe7s/L/0p/p+Gor6X/r4V+v4mVffDvUbJNRjTUdNutQ0qHzr7TreVzNbqMbiSUCNtz82xmxTLD4f395a6ZJc6lpunT6vk6fa3kkiyXIzgEbUZVBPALsua6OTXvDel+IPFHiXT9ZF62s2lxFaaeLeVZY3uPveaWUR4TJ+6zZwKhGseHNdk8JalqGtDS5dDtobW8tZLeV5JVhcsrQlFKncDj5mXBpRbdr+V/Le/wCnfccrK9vO3nta/wCPbYg+HPgvTdX8RajY+Jp7aOa0troNYTGdZUkjT/WZjXbtU5yN2eD8p4zxWp2UFhciK11O11NCu4zWqyqoP9396iHP4Y5612vhvxrp6/FfVde1TdZ2WrC7QuEL+QJg20kKMnGRnHNcXqdlb2F0IrTVLXU0K7vOtUlVQfTEiIc/hjnrSTbab7L79Ruyul3/AA0G6Xpl3rWq22m6bD513dSCKGPcF3MegySAPxNdpN8D/iHb28k03h7bHGpd2+225wAMn/lpXF6XcWlpqttPqVl9vtI5A01r5pi85e67xyufUV2k3i74ePbyJD8MPKkZSEk/4SC4baccHG3nHpVSvbTcmO+uxwFbXhrwtf8Aiqe+h0x4FksrN7xxO+wMilQQDjGfmHXA65IrFrq/A2t2OixeJRqFwYGvtDuLS3wjNvlYptXgHGcHk4HvT6N+T/IFuvVEVr4Iu9S1a3sdG1LTdSEySSPcQSOsdusfLtJvRWUAEHOCDnjNRah4PvLXTrTUNOvLTWLK6ufsiT2BkIE3URssiIwJByOMHsaseAddsNE1m+j1hpIrLU9Pn0+WeNdxg8wDD7e4BAyBzjOPSteDxFpXhTwtYaXp9/FrVyutxapPJbxyJEixDCoDKqsWOSSQuB0yaOqXp+ev3IOj+f5afe9DNvvh3qNkmoxpqOm3WoaVD519p1vK5mt1GNxJKBG25+bYzYrW0nwZoN38KNQ1e41nTY79LyBFunF3ttgyktE6rEcsT3VWHH3qtSa94b0vxB4o8S6frIvW1m0uIrTTxbyrLG9x97zSyiPCZP3WbOBWP4b1XSp/hzrfhnUdSi0u4ubyC7gnuIpXifYCGU+WjMDzkHGKzvJx89Pvvr+BWil5a/lp+Jxs8aw3EkccyTojFVljDBXAP3huAOD7gH2q/wCH9AvfEusR6bpwjEjqzvJK+yOJFG5nduygAkn+tWfDlloEvi6G08UanJBo291mvbNWJICttZQULYLBeq5wegq94E1zT9E169i1R5I9P1Oxn0+W4RN7QLIMCTb3wQMj0zjmr6fIkS88B3cPhhtfsNT07VbAXaWamzaXe0rAnbseNWHQdQM5GM1Je/DvUrKK/QahptxqOmQeffabBK7T26DG4k7PLYrkbgrsRXV2Mtj4X+EBvLDUodWkh8S20++GOVImZELBB5iq2cDJO0DkcmoNe8ZxTXur6pofiXSreDUo5v8ARF8PRpelZc5heQQ7SOcF/NJPXBPFTJvVL+tE1+LZStpf+tWvyKWk+DNBu/hRqGr3Gs6bHfpeQIt04u9tsGUlonVYjlie6qw4+9XM6Z4Un1OG/vBqFjbaXYOI5dSuDIsLMSdqqAhkYkAnATIHXFbHhvVdKn+HOt+GdR1KLS7i5vILuCe4ileJ9gIZT5aMwPOQcYpul6jpNx4J1HwjqOqxWTLqK31nqBhleCUhTGysFUyKCMMDs9iBTd7ya8rfhf8AUlWsr+f62/QueAfDtpc614hsZpNN1JF0G5lt7n70SNhcSDeoKEc8kAiuc13wpcaJplhqa31lqOn35dYbqzZyu5CAykOqsCMjqO/Fa/hTUdH8N6h4gim1VLiO60O5tIZ44JAkszgYVQV3Y46sF98Uy+1rTbv4T6Focd2q39vqU8s6NG+I0cKAxOMHoeBk+1Dve67L83+mo1a1n3f5L9RniDR5dO8B6NcRy6JeWU1zOI72xhlW4dgF3JIZEUlVyMYHc1o2Vwmr/B/xFcXtjpv2iwuLKK3nh06CGVFYsGBdEDNnaMkkk1Jqv9gz/DXSdDg8W6W95p91c3EmLe8CyBwu1VJg6/KeuB71m+FdU0tvBPiHw7qmox6ZLqD289vczRSPEWiY5RvLVmGQ3BwelD1Ul6fp/wAES05X6/r/AMAy9F8K3Or6Vd6rLeWmm6ZaOsUt5eF9nmN91FCKzM2OeF4HXFdV4y8JKlz4G0bTksI7vUbCONrmDHlzu8zKsjMoywIK8kZx27Vm6Xf6Rc+BdR8J3+rwWUiakt9aXzQzNBNhDGynahdcjDD5PritjVvEvh1fFPw/fTtTa5s9Cit4ry4aCRdpSfcx2kZIxyMZ4wOvFVvJLpdfdZ3/ABFtFvrZ/mv0OU1bwbc6Q1zBLqWnz39rN5UthBI7TDL7QRlArZOOAxYZGQOcW734d6lZRX6DUNNuNR0yDz77TYJXae3QY3EnZ5bFcjcFdiKpX+uxxfEe516zP2mJNVa8h3ZXzFEpdevIyMV2OveM4pr3V9U0PxLpVvBqUc3+iL4ejS9Ky5zC8gh2kc4L+aSeuCeKzvLkT6/8NYt8vO10MS2+F+p3L6VANW0iO81izW7sLSSaQSTqwJC/c2q3GPmIBPQnnGf4D0CHXPHFpYakjfZITJcXaZwTHEpd1/Hbj8a6m08X6HF4/wDAWpPfYtNI022gvZPJf906b9wxty2MjkAisjwPrtnY/FU3NxOI7DUJLi1kmJ2hUmDIH56AFgefSr97mfL/AHrfLb7yNOXXyv8APf7jlbnU/P1+TU47S1i3XBnW2WFfJX5shNmMbe2MdK3PiJpFrpXivzNMiWGw1K1h1C2iXpGkqBio9g24D2ArDudGvrXX5NGkt3+3x3BtjCBkmTdtwPXJro/idewT+LItPtJFli0awt9NEiNkO0SAPg9/nLD8KWnLG39K3/DFa8zv/Tv/AMOcdRRRVEhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBYuP9Ra/9cj/6G1V6sXH+otf+uR/9Daq9AwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAasMMlxKI4ULu3QCn3dnPZTCO5UKzKHGGDAg9DkEioK3dR2HWtL83GzyLfdnpjiufsaGbLpl1BD5k0ap8u7YZF3gepTO4D8Kw67O5jttR1jVIHtvLkjEsiz723ZXn5gTjB6cAYrjKumKQUUUVqQFFFFAF/SNNg1O6MNxqtnpnA2vdrMyuc42jyo3OfqAPepfEeg3XhjxFeaNfyQyXFm+yR4CShOAeCQD39Ko2n/H9B/wBdF/nXXfF3/krev/8AXwP/AEBaT3Xz/C3+Y11+X6nNTaX5Oh2upfbrOT7RK8f2WObM8W3HzOmOFOeDnnBqhXeeJmivfhR4c1SSysYb2a+uopJrWyity6qE2hvLVQcZPWtnwZBoGueGtL0fRr/RtN8SPLIk8OsaQtyL5ix2BZmVhGNuFwADn8DRrqLon/W7POtG0PUfEF49rpFv9omjhedl3quEQZY5YgcDt1rPr1P4SX15pvjTV9Me2sovKsr53U2kUjI6xkbRIyl9nH3d209wcmsrwJHa+LPF1zdeIotNCadpk92kIs0t4JGjGV8xIEBYAnccKSQuORxS5tdNrX/P/Iq333t+X+ZwNFd34pufD974Ojf+0dFufEEV78p0fT5LVHtmXkODDGpZWAwcZweprhKadxNBRXvGk+APtGi2M/8AwpT7Z5lvG/2n/hK/L87Kg79u75c9cds15F4wsf7N8X6jZ/2R/Yvky7f7P+0/aPI4Hy+Z/F6596L2lygtY8xjRoZZUjXGWYKM+9bXivwxJ4R1qTSrvUbK8u4TidbTzSIm4OCXRQeD/DkVk2n/AB/Qf9dF/nXW/F3/AJK14g/6+B/6AtD3Xz/C3+YLr8v1MrUPCs1j4Ts/EMWo2V5Z3U5ttsHmh4pAgYqwdFHAI5BI9Cawa7m7/wCSC6d/2ME3/ohK4aj7TX9bJgvhT/rdoKKKKYgooooAKKKKACiiigAooooAKs2F/c6XfRXljL5U8RyrYB7YIIPBBBIIPBBqtRQBrav4m1XW7WC1v5oha27M0VtbW0VvEjN1bZGqrk464zWTRRQMKKKKBBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/AFFr/wBcj/6G1V6sXH+otf8Arkf/AENqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBqRSNFIroFJXoHQMPyPBqxd6nc3yKtyYm2gAFYEUgDoMgA49qghaNZQ00ZkQdVDbc/jV/WIbe0vrcwQKqPBHK0e5ipJGSOucfjXMakMmrXkkLxPKMOoV2CKHcDsWAyfxNYNdXbi0m0m9u59OgjWNQkTRvJkyN06ueg5rlK0p7smQUUUVqQFFFFABW1qvi3WNcWD+1pba6kgKbZ3sofObaMKHk2b3GOzEg96yraFJ5wktxHbqf+WkgYgf98gn9K6DxTaxwah9gsGs9iMiR28MBEuSo5LlBuyT/ePUcVtGk5Q5/NfeQ5pS5Rbj4ga9daYunT/2W1mhYxwDRbMLGWGGKgRfKTxyMHiq+meNNd0iCGOwuYUNuCIJpLOGSaAHPEcrIXTqfukYzVefw9cQrchbi2mntV3T28bMXjHfqADjvgnFRW+jS3GmDUGuIILbzjEzyFvlIAPQAk9e2T7VPsZ3tbz/AE/4A/aR3uN0vXNS0XWE1XTbt4b5GZhMQGJ3AhshshsgnIOc5qwfE+qrrcGr200NlfW4xHJYWsVqB1/hiVVOckHI5HByKzbiH7PcNEXSTaeHjOVYeoqfSNNm1nWrLTLVkSa9uEt42kJChnYKCcAnGT6VHLrYq6s2WtV8S6lrNuILxrZIQ/mGO1sobZWfpuYRIoY8nk561k10mp+C7rS5Z7V9R0+41G3nEMmnwSO0wJfYpGUCtk44DFhkZA5x2Hg/wAmna9rNvrN1o+oXNjpN01zp4LSSWsnlHaTuQIxVsDKM201F0ouS839yKs+ZRf8AWp5XRXRQ+Dpho9pqOqarp2kx3wLWcV40vmXCg43ARo21cggF9oOPTmufkQxyMhKkqSCVYEH6EdarrYXS4sMnlTpJjOxg2PXBrf8AG/iSz8W+JbjWrTTp7Ca6bfPHLdidS2ABtxGhUYHQ5+tYMEayzKkkyQKeskgYqPrtBP6Vqarp87eIo7Jls45ZREi/ZlKx/MBg8jPfJ4rRU3JJrvb7/wDhiOZJ2/rQu6j4ns7jwHY+GrDTZ7cW9215LcTXYl8x2QIQFEa7V4yAST7muarWuvD89tBduLm2mazbbcRxMxaPnGeQARn0JrJqZQcX73X/AIb9BxkmtOgUVtaL4YudZsLvUHurXTtNsyqzXt4zCMO33UARWZmOCcKp4GTium8A+HbS51rxDYzSabqSLoNzLb3P3okbC4kG9QUI55IBFS9L/wBdLlLVr+vI8/ord13wpcaJplhqa31lqOn35dYbqzZyu5CAykOqsCMjqO/FaPiDR5dO8B6NcRy6JeWU1zOI72xhlW4dgF3JIZEUlVyMYHc0r6BbU5Giu/srhNX+D/iK4vbHTftFhcWUVvPDp0EMqKxYMC6IGbO0ZJJJrndF8K3Or6Vd6rLeWmm6ZaOsUt5eF9nmN91FCKzM2OeF4HXFPq12/wCB/mHRGFRXo/jLwkqXPgbRtOSwju9RsI42uYMeXO7zMqyMyjLAgryRnHbtXNat4NudIa5gl1LT57+1m8qWwgkdphl9oIygVsnHAYsMjIHOFf8ANr7nYLafJP71c52iutvfh3qVlFfoNQ0241HTIPPvtNgldp7dBjcSdnlsVyNwV2IqzbfC/U7l9KgGraRHeaxZrd2FpJNIJJ1YEhfubVbjHzEAnoTzg5la/wDX9aBZnE0V3VjY6VpXwr/tu90G01LUTrbWJ+1y3ChIxCHwBFInO7PJz1qTXvAP2rxVplj4bt/sbahpceo3Frcynbp4IJfe55CgDdzk4YDk0Npf15X/ACCz/r1t+ZwNFdDqHg+8tdOtNQ068tNYsrq5+yJPYGQgTdRGyyIjAkHI4wexq7ffDvUbJNRjTUdNutQ0qHzr7TreVzNbqMbiSUCNtz82xmxRdBZnI0V6JpPgzQbv4Uahq9xrOmx36XkCLdOLvbbBlJaJ1WI5YnuqsOPvVy/hzwtdeKfF0Ph/Sbu1aed3WK4kLrEwVWbd93cAQvGVz0yBRfVrt/lcX2eYw6Kc6lHZT1U4OKbTG1Z2YUUUUCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKALFx/qLX/rkf/Q2qvVi4/1Fr/1yP/obVXoGFFFFAgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDUiRZJFV5FiB6u4OB+QJ/StPW3trhoJba8il8uCOIoquDkDBPKgY/Gs2GGS4lEcKF3boBT7qznspliuECuyhgFYNkHocgkVzGpbv7uH+y7KxtH3pGplmbBGZG7c+g4rnK3pdIvYYneSEDywGdRIpdAe7KDkfiKwa0p7smQUUUVqQFFFFACjqK29W1WCTxh/aVo3nQpLG6nBXdtC5HP0rDorWNWUFZd0/uJcU3d+h0rX2nWl5quoW94JzexSJFb+WwZTJ135G3jnoTms9r2A+EI7ESf6QL1pSmD93YBnPTrWVRVOs2mkrK1vxuSqaWv9dgrY8JX1vpnjTRb++k8q2tb+CaZ9pbaiyAk4HJ4HaseisYtp3RbV1Y6C91yKL4kXGvWh+0QrqzXkRII8xRKXHXkZHrXdafrfhCw8ZeJfEY8Rh49XsrtbW0+yTebHJMpO2U7NgwTtG0sDweK801HSn0vEdzcwG44L26biyZGeTt2+nQnrVClKnyr2b6Jr79GUp8z511s/u1R3GrXui+LtD0KS41qHSL7S7FbCe3uoJnEqISVeNo0YEkNghtuCOuK4mQKJGEbFkBO1iMEj1x2ptFHW4dLEtvCk82yW4jt1xnfKGI+nygn9K6LUrvT5PE1pqUOowyRRvAGRY5QwCgAnlAMceua5iit6dZ01ZJbp/d/w5nKCk738joU1SzH/AAkeZv8Aj9z5Hyn5/wB5n0449cVz1aGo6HqOk2dhdahb+VDqMPn2rb1bzEzjOASRyOhwaz6zlNzsn00/Fv8ANjjFRu111/A7DQ9V0u+8A3vhbVb5dLk+3JqFrdyxPJEzBCjRvsDMvByCFPIINSeFNR0fw3qHiCKbVUuI7rQ7m0hnjgkCSzOBhVBXdjjqwX3xXF0Vm1e/n/lYtaW8v87nY32tabd/CfQtDju1W/t9SnlnRo3xGjhQGJxg9DwMn2rS1X+wZ/hrpOhweLdLe80+6ubiTFveBZA4XaqkwdflPXA9688ooavfz/4H+QLS3l+t/wDM7Hwrqmlt4J8Q+HdU1GPTJdQe3nt7maKR4i0THKN5aswyG4OD0qTS7/SLnwLqPhO/1eCykTUlvrS+aGZoJsIY2U7ULrkYYfJ9cVyMFr51vPL58MfkqG2SPhpMnGFHc1BTcer6/p/wwk+3T+v1PTdW8S+HV8U/D99O1Nrmz0KK3ivLhoJF2lJ9zHaRkjHIxnjA68VyV/rscXxHudesz9piTVWvId2V8xRKXXryMjFc/RQtGn5t/e7g9Vb0X3aHqOveM4pr3V9U0PxLpVvBqUc3+iL4ejS9Ky5zC8gh2kc4L+aSeuCeKbaeL9Di8f8AgLUnvsWmkabbQXsnkv8AunTfuGNuWxkcgEV5hU1pbPe3sFrEVDzyLGpboCTgZ/OlGNmrdLfr/mEndO/n+n+R3reO20zwDdWfh3W7ux1KbxFLeYtXkiL25jABLDAI3D7pOfatOHxj4Yn1iPWbu4Ntda9pE+m63HDbt/o87AKLkDG1g2ASq8jngk15zruj3Hh7X73SL143uLKZoZGiJKFgcHBIBx+ArPqYxi46dvwtb8vxLbal/Xe/5noEHiLSvCnhaw0vT7+LWrldbi1SeS3jkSJFiGFQGVVYsckkhcDpk1ek17w3pfiDxR4l0/WRetrNpcRWmni3lWWN7j73mllEeEyfus2cCvMaKbjff+rpL8kJO239Wbf6nbeG9V0qf4c634Z1HUotLuLm8gu4J7iKV4n2AhlPlozA85BxisXw5ZaBL4uhtPFGpyQaNvdZr2zViSArbWUFC2CwXqucHoKw6KdtW+/+VielhzhQ7BDlc8E9xTaKKY3qwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/UWv/XI/wDobVXqxcf6i1/65H/0Nqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBo1t6sjyarpyREB2t4ApPY44rHikaKRXQKSvQOgYfkeDVm61S6vFUXDRnbgKyworADoMgA49q5zQ3HaKbVNXitkZLswyB5WOUbH3sL1XOO5NcNW/LrF9NHIkkw/eDbIwjUM49CwGT+JrAq6YpBRRRWpAUUUUAFFFFABRRRQAVNbXD206yRiNmHGJIlkH5MCKhoqotxaaBq6sdV4jkN940FhOIlheeJSyQor4KqD84GT17mlZILzUda06Syt4YLSGVoCkKq8RjPBLAbmz3znrXN3d7cX1411dSb5mxlwAOgwOn0qzPrmoXMEkU04IlAErCJVeQDpuYDc34k11vERbk31b/FaX9DBU5JJLpYvwNDa+DUu1toHuTfNGskkSvgbAehGD9Dkc1i3E3n3DSiNI9xyVjGFB9h2+lON5ObAWRk/wBHWQyhNo+9jGc9elQVhVqc7VtrL8tTSMbbnZfDLR9N1bxLdvrAgeHT9OnvViud/lO8a5XeEBYqM7iACSFxg1c8Q3+hSeF7a6j1DQbvxHa6gGj/ALL0t4IZLcrnEiPAkbFWA6g5BIOa4vTdTvdH1KG/0u5ktbqBt0csTYK9j+BBII6EEg1c1XxLqWs24gvGtkhD+YY7WyhtlZ+m5hEihjyeTnrWEk21b+tf6RpHTf8ArQ774h+Ir3/hC/By+RpuLzSGMv8AxK7bK5kYfIfLzH/wDbzz1o0GxstCXwzZaw1k8+sLFOllF4fgvWljkfC+ZNK6shPIxH0A9a4VfFurjQY9Gkltp7GJXWFLmyhmaEPy2x3QumTz8pHPNWLLx54i0+ytLa1vowtiCtpK9pC81uCckRyshdBnsGFCSTfrf5a6Cd3G3lb56anZ61o2neDdL8WahpVhaXFzBr/9mWwvLdLlbODDPkJIGUk4C7mB4Bxya2hoGg6pq3h2/u9K02wRfC0uqy24hKQTzKWIaRYwWZed2ACcLjGOK8/0XxPqF3qWsXV94ktLC41MrJcjUNPFxbXbbs/PGsbgMDyP3Z78jvd8aeO5rzxHo13oGqTvNo1ilsuoKhiM0mWLsq9kO4qFIA2jGAOKi0kknv8A/atfnqXdOTa/rVP8tBPFNz4fvfB0b/2jotz4givflOj6fJao9sy8hwYY1LKwGDjOD1NcJWtqviXUtZtxBeNbJCH8wx2tlDbKz9NzCJFDHk8nPWsmqSsJu5u6UVn8N6uk0MDfZ4kaJ/ITepLjPz43frTrV47TwabtLW2kuPt+wSTQq5C7M4wQRVG212+tLVreD7OsTKFcG0ibeByNxK5b8agl1G5mtWtndRC0vnGNI1Ub8YyMAY47Diu320VHS97W/G/ftoc/JJvXa9/wL/im1htNdZbaNYkkijk2IMKpZQTgemaxqsXl9cahcedeSeZJtCbtoHAGB09qr1hVlGVSUo7Nu3pfQ0gmopPc9J8Y6hZeHI/DcGnaHpRF3oFpNemayjczFlIOCRlG6kuuGJPJOBVtHtfDV54EsNO0ewuotUt7e6vJp7VJZbiSSXaVWQjdHtwANhXB615zqms3+statqU/nGztktIPkVdkScKvAGcZ6nn3rS03xz4h0myt7WxvkWO0ZmtWltopZLYnk+U7qWjyeflIqFpK/nf5a6fiU9Vbyt89NT0DxjBbaRN4z8SxWVre6kfERsIzdwLOltGVLl/LcFSzEYywOMHFeVX9+2o3n2mS3t4ZGA3LbQrEjH12LhVz6KAPatOLxrr8WqajqAvlkm1Q7r1JreOSK4Oc5aJlKHB5Hy8dqy9Q1G51O8NzdshkwABHEsaIB0CooCqPYACopxcbX6W/Bf0y5STbfr+Zr+Obr7Z4wup/+Ec/4Rrcsf8AxLPL2eThFGcbV+997oOvfrXPVo67rupeJdYl1TWrn7TezBQ8vlqmQqhRwoA6AdqzqcVZWJCiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCxcf6i1/65H/0Nqr1YuP8AUWv/AFyP/obVXoGFFFFAgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDVhaNZQ00ZkQdVDbc/jWnqNjANVs4bdBAlxFExAJIBbqeSTWXEiySKryLED1dwcD8gT+lamtSW07281reRymOGOIqquGyo5PKgY/Gufsakz2dpcX19YQWgia2Ryku9izFOu7Jxz7AYrka7AauYILiSS+juppojGoSDaxzxl22jOB2yea4+rpkyCiiitSAooooAKKKKACiiigAooooAKKKKACiiigCxZWUt/dLBBs3sQAHkVM8443EZPPTrWze+GkiU/Zp42Ml15MG65jO5OhbA5J3EcDkdxVHQr22sL4z3UMchjUvGX35DgHaBggcnHXNX21K2utS0i3tbeFUieMl1MmQ7NlwNzHjJ756daWt0h9GylcaBPAbpFubaaa1BaaGNmLKo6nkAH8DmobfSZZ9O+3NPDDbiUxM0hPynGc4AOevbJ9q2Lqay03WNXuVuxLJKJYkgCNuDMcEsSNuBz0JzxWWbyH/hFRZiT9/wDbTKUwfu7MZz061Kbav6DaSY/SrBn1tII57GSVXHlrOHeObP0U8fXFV7PTJtSu7iKFoY2hR5W3HaoC9cVP4ee2ttWt7y7vIoEgkDFWVyzD22qR+ZFT2c9pYXV+zXsUy3FpKiGNH+83QHKj/Cm7oSKVzpbW0VvMbmCS3uGKrPGWKqQecggMMZ9Kv6tpNlbabYSwXduryW5dv9afOOTyuV49OcVWuLyB/C9naK+Z47iR3TaeAQMHPSpL6e11DR7ALdxwzWkLRvDIr5bnI2kKRz7kUO/9egL+vvItNgjTStQv5Y1kMSrDEGGQHf8Aix7AH8cVXs9Oku4JZzLFb28JAeaYnbk9AAAST9BVzTH+0aHqVgv+sIW4jGfvbM7h+Rz+FO0vUo49HmsJJYYHMwmjkntxMh4wQQVbHbBAPem+v9f11D+v6/ArNFcaPfKjC3kEqqyO0Syo6HoRuH9Aal8QwRR+J7qGIR28QkAGFwqDA7AdPoKh1O9e4uYd9zHciFAqmKERKoznAGBx+AqbxBLa3uoy39pdJIJyCYSjB045zkY7djS7fMCxq2k2VtpthLBd26vJbl2/1p845PK5Xj05xUOlQWd1p1+JLXM0Fs0olMh4YEAYAwMYPfNLfT2uoaPYBbuOGa0haN4ZFfLc5G0hSOfcil0V7SCzvvtN/DC9zbtCqMkhIOQcnCkY49aNbP5h2+Ri1YsbKbULtbe327iCSzHCqAMkk9gBUtjDYnVUi1G5K2mSHmhB9DgjK5647VLot5BZ3sy3JZYLiF4GkAyUDD72O/amAS6LKmnG+gube5g80RAxFslj2wVB/wD106bQbiFZx59vJPbpvmt0Yl4x37bTjvgmtOFodN8KmWC4S6ZNQjfKKwUkAnA3AHtzx3pl7q6vNdXNnqFsiXCt+6Fgomw3VS2zH1O73pNvp/WiGrdSG10myl8Mz3Ul3brMsqASHzcRgg5UgLyfoCPes630x7hJ5fPhjtoW2tcSFghJ6ADG4k+mKt6fc2z6DeadcXC20kkqSo8isVOMgj5QSPypLae1k0e40u4uVhInE0U+1ijEDaQcDcOORx9aNbv+uwuiJdEsIpLy+hZre4AspGSTqoPGG+YZGPcA1QvdMks7eG4E0NxBOSEkiJxkdQQQCDz6Va0ye10+e+V7kOslnJEjqjYZzjAHGfxIFJNd28vhmys1lAnjuHZ1Kn5VIGDnH8qNb/13H/X4Db60aDRbR1azmheRws0KMJCeMhiwHA7VYhcXXhW/eaG33wSQrG6QIjAEnPIAJ6d6W5+xP4ftrNNUtmlglkkb5JcMDjAHydeO9Qabc2x0e/sLmdbdpzG8cjqxXKk8HaCR19KOjF2K1ppsl1bS3LSxW9vEQrSyk43HoAFBJP4VpatpYWTRrSAQLLcQKpkT7rlnIDEgc9veq9tPayaLcaZPdJCwuBNFMVYo/G0g4BYccjird1qFgNS0MwXBkisljWVyjDGHyTj9afVev6B0f9dTMutJktTIjXEDzxvtaBGJcc4B6YP0BzzyKlm0G4hWcefbyT26b5rdGJeMd+20474JqGe9VdfkvYf3ii5MqZyNw3ZFa17q6vNdXNnqFsiXCt+6Fgomw3VS2zH1O73pa2Q9LlOPw5cSNbJ9ptVluohLBEztucHPHTAPHcioNFsVvNZihuAfKTc8o/2VBJH6YrSi1WzXXNEuDN+6tbeNJm2n5SM5HTnr2qpo97FD4m8yR9sE7PGznjAcEZ/UGnr08/8AgC0tr5f8EzpLjffNcLFGuZN4jCDYOc4x0x7Vc161jttT3W6hIbiNJ41HRQwzj8DmqclpNFfNaMh85ZPL2DqWzjFX/EUyPqaQRMGW0gjt9wOQSo5/XNHawdXcS8gjl8P2V9Gio6u1vLtGNxGCp+uD+lZVbF432bwxZWbf6yaVrph3C4Cr+eCax6OrDogooopiCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKALFx/qLX/AK5H/wBDaq9WLj/UWv8A1yP/AKG1V6BhRRRQIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA17a1mvJvKtoy74JwOMAdyewp9xYXFrGskqKY2OBJG6upPplSRn2qGJZJJBHCGZ5PlCr1b2rexBpkdtpcrrJPJdRy3ODlY8HGz3PPNc9jQypdKvIIDLLDhVALDepZAehZQcj8RWFXdL5X9t6nnzvN8q5+0b8bNv8OO/p+lcLV02EgooorUzCiiigAooooAKKKKACiiigAooooAKKKKACnwyvBMksR2vGwZTjOCORXV/DnSrHUtdvptRtlvF03Tbi+itHztuJI1yqsByRk5IHXHpms2TULzxXqdlYmy0yO4muFihNtZx2o+YgBW8pVBGT1IJ96NeZJf10Do29jHmmkuLiSaZt0kjFmOMZJ5NR17RZaVomo6j4j8NXJtbyfTtOuXYWvh+G2jtpYh95LkSecwD4Hzg7u9U9QuLXSdQ8Bafa+HNJlg1PTbRr0y6fE73ZkYq3zlcq2P4lIOTyeBUp3aS62/G/+Q3pdvpf8Lf5nmejaHqPiC8e10i3+0TRwvOy71XCIMscsQOB261n17H4Cb/hHfip4m0HTltZLK0h1DynltIpJPkUgDzGUtjgZXO088HNc14NmTxJfeI59XstOla38O3TxLFp8EKo64KuFjRVDDJ+bGfelzXV1ta/5/5FctnZ97fl/mcDRXcatp1pF8E/D1+lnCl3Pqdyj3AiAkkUBcAtjJA54rR8Y6hZeHI/DcGnaHpRF3oFpNemayjczFlIOCRlG6kuuGJPJOBVN2v62+9XJSv/AF52PNq3dC8G6x4l8pdGWxnlmcpHA+pW0UzkekbyBz+VegQ2nh/w1pfhRZ7rw7Hb31nHe6kNTsJbm4uQ7EMqOsLiMKAVGxlOQSfWsb4eR6dF8fdPTQ5jPpq6hKLWQhgWi2vtJDAHOMdRRfW3r+AnpHm/rU4zVdEu9GaMXkli5kzj7JfwXOMdc+U7bevfGazq7b4c6PpureLr99YEDw6fY3N6sVzv8p3jGV3hAWKjO4gAkhcYNS+J7rQLvwfFJ/aOiXPiGG++Q6Rp0lrG9sV5DqYY0JVgMHGcHkmle1r/ANa2LcdWl0uvuOErQh0PUZ9AuNait92n20ywSzb1G12GVG3OTnHUDFeualpljb/C0+OI/CNvHrV5aR28luYIjbW8Zyv21YMYXftAHGAecdzj6H4ivYfgTrMqQaaWttStYUD6XbOpXYeXBjIduPvNlvehysn3VvzS/r/gEpXt53/K/wDX/BPK6kgnktpllhba6ng4zRPM1zcSTSBA8jFmEcaooJOeFUAAewAArsvhhof9va1eQf8ACH/8JX5dvv8As39p/YvK+YDfuyN3pj3qkJuxyd1qNzeRpHM6iOMkrHHGsagnqdqgDPvVWvXPiF4P/sbwhNef8Kt/4RvbKi/2h/wkP2vZk/d8vcc56Z7V5HUxaexTTQVoaNoeo+ILx7XSLf7RNHC87LvVcIgyxyxA4HbrXpsNp4f8NaX4UWe68Ox299Zx3upDU7CW5uLkOxDKjrC4jCgFRsZTkEn1pvwy1G2sviFrth4fa1uNJFrfS2s0tlG0rIEOzLum/GAMqTg85HJolK3N5X/D+v8AhhJXt52/E8korsfC8d14t8Uvc3Y0mCPT7KW5uHOmxrFHEgyW8mJVWRhu4B68Z4FdTNpGheKvAtpqEbDzF1+Cwa/XR4NNPlyL867IXZGx8p3EAjp0NVrdL0/F2Dz/AK0VzyWivZ9MNhefEDxb4fm8NaSmn6XYXos0FhGJIDEu1XMmN7k9csW5IIxVWG08P+GtL8KLPdeHY7e+s473UhqdhLc3FyHYhlR1hcRhQCo2MpyCT61KknZrrb8b/wCQ2rXv0v8Ahb/M8iorXv8ATIr7xbeWHhGK41O2a4kFisMLvJJECSp243Z2jJ47Gqen30+l363EEdu0qZG25to50545SRWU/iOKqPvW8xNWdjU8ReE5vDASHUtSsTqJVGl06IytLCHXcNzbPL6EZAcnkVnzaX5Oh2upfbrOT7RK8f2WObM8W3HzOmOFOeDnnBrt/jTq9zP8QL+weOzEMYgdWjsYUlJ8hOsqoHI5PBYjp6CqviZor34UeHNUksrGG9mvrqKSa1sorcuqhNoby1UHGT1qE3y3H1S/ra5wdFe1afDpg8W+AtBOhaQ9nrGkW5vzJYxtJMzhwW343K3H3lIJPUnjHL2dnaeHfAGtazaWVreajHrQ06OS8t0uFt4gpbcI3DLliMZI7cVTdm7/ANWdv1Qkr2+X4q/6HJ6x4du9EsdKuruSF01W1+1QCNiSqbiuGyBg5U9M1n2sKXF1HFLcxWqOwDTzBikY9SFDNj6An2r2TWtOPiC88IXQt9PsLe28Mvf3KzW5lhhRWYsyxA/Nycqh45APHFYPiG10fWPhNLr1kqy3NpqyWy3Y0aDTiyNGSyFIXZXwdpyQCM470ua179//AG6yGle1u36XOQ8Q+FZvD9jpl6dQstQtdUjeS3mtPNAIRtpyJEQjn2qZ/B7t4TuvEFlrOm3tvZtElxDCJ1liaTO0HfEqnoc4JHFa3jT/AJJ14C/687r/ANKDR4f/AOSL+L/+vyw/9Ceh6KXk/wD26wlq15r9LnIabp91q2qW2n2ERmubqVYokH8TMcCn3elyW2tzaXFNDdyxzmASQMTHIwOMqWA4z3OK6v4RIjfEBGP+vjsbt7bHXzRA+3Hv1I61xtrcvaXkVzGAzxOHAbkEj1pyvey7X/r7iXflbjv0+7/goJrWa3jjeZNqy52HIOcHB/UVLb2Dz2kly8sUEMbBN8hPzMecAAE5ptxevdRQRShVWHcAVHPzMWPf3q/qgS20awtrZi8Mu64LuNrM33eV7Yx6ms3KWie7OeU5rli92/w/4Yz2spF05L1mURvIY1XJ3EgZJ+nNRwQSXVwkEC75JG2qucZNdDE3lroWnpDFI0uJZPMjD/K7dMH2H1qPSpVh1++kt44xBAs0wBjVioXO3BIyOSOlR7V2bt3MfrMuSTtqrtffZGA6lHZW4KnB5qS4tprSRUuE2MyhwMg8EZHSp4Lie61KD5YfMdggAt0wcnH3duCefSrmt3Ml/rs1qix7fP8AKTbEobj5QNwGSPxrTmlzJG7qTVRRaW12Y1FdRMbaXWdTthZ26WlvA+cRKGVlGA27Gc5rFs5Ps1ncSTWPnxzIYUlZeI39QcdaUanMr27fiKGIc435ddPxKNS3FtLayCO4TY+0NtJGQCMjPpx2q3o9vG909zcjNtaL5sg/vf3V/E4FRKtxq+qgfenuZOT7k/yFVze9bojR1Pfa6Ja/16b/ACIWtpUtUuGTEUjFUYkfMR1wOvfrUVbfnwXXiWyt41ElnBIkEakZDLu5JHfJJNXf+EfXT5v7SvQrW0fmStCVAHBARf8AgWRx7Vm6yj8XU53i1CyqbvZfkvX9Tl6K6q48OPqYiurVUgRoICESMAMWxuPHoDk1IdLttdgVNOjit447povOWMZKKgwSRjOT/Ol9Yh/n5EfX6Vr/AH+RyNFa2p2wtIbPTY4Q13gSTFVy+5uievAxx6motHszPr9tbTx9Jf3iOOy8kEH6GtPaLl5jpVaLpup01fyXUzqK66L7LLHBK9nbKjw3FxIBCoxGCQgHHrjnrVMw2umx2aebZK7xrLP9phaRm3c7R8hAAHoQazVa+ljCOMu7cuv/AA/+X4o52rEllJFYQXbldk7MqDJz8uMn6c1qSpZ2tpd39lGkqvdGG38xNyouNxO1uvUDkUa7K0T6bEkaK0Vsshj2AqHY5Pynj8Kr2jbSS/qxft3OcVFff5L/ADsZMsHlQwyebE/mqTtRslOcYYdjUNbOsWpn8QpY20UaSbY4sIgQFiASSAPU1agiszY6kjFJltoCMi0VAr5wpEmdx59etHtbRT7i+spQjJ9dfv2OcpQMsBnGT1NdRN4afUY4bi1CwobeDChPvFsbjx6A5NVrR7e68WJFawQfZAdmGiVgyKOWOR1OOvXmkq0WnboJYyEotx1srvyMkWDvqa2MMkUrs4RXjbKHPfPpUE0RhnkiYhijFSV6HBxWv4fKyeITdNiOKFZJ2wvCAA9h6ZFR6zHHaCK3to1aCRFlFywDPNnvntzxgfjmnzvn5fIpVmqypPsv+D/wxnpBvtZJvNiXy2A8st8zZ7gdwKhrWvsDw7p5eKISyu7b1iVW2rhQCQOe9Znky+R53lv5W7Z5m07d2M4z647VcZXV2bU58ybfdr7tBlFadqkdrokl+Y0lmefyI/MUMqfLuJweCeg5q49nFc6xpEYiRJJ443nRVCqeSc4HAyo6dKl1EmZyxCi3daK/4K5gUVrmePUNUeytreCOC5nCxssYDIC45Bxnp26c1dt3gabVB9htxbWcDiLdECQ+dqkseSTyeaTqNLVCliHFax1/r9Tn7eCW6uEgt0LySHaqjuaYRtYg4yDjg5rUs/8AiX6RNfHia4zBb+oH8bflx+NTeG7FdQluLe4gDQOgDTYAaJs/Lgn1PGO9OVSycuiHOvyKU38K/p/13MSiujjaJ21KZdPhjSzhEEUTxqSHZtoLercGpNbito7PUNtvAgS4jhiZIgp3BcucgdD6dKn22trf1p/mZrF++o8v9af5oxJtOMWnLepcQyxtJ5eE3AhsZ7gVXt4Jbq4SC3QvJIdqqO5rS1LMGh6XbZ5ZXnYD/aOF/QUln/xL9ImvjxNcZgt/UD+Nvy4/Gmpvlv56Fxqy9nfdttL77f8AB9DLI2sQcZBxwc0lbOn20EWjPeyyQJNJN5URuELqoAyTgKcnnHIqT/R59ZsDp8EF3KVAnijiIjY5IJwwGOO+MDrT9pq1YHiLNpLRX16aGFRW/rVrBaXUWlWFsAJWDi4cBmk3HgKf7o6e+KszG2l1nU7YWdulpbwPnEShlZRgNuxnOan2ytdIn62nFSS0av8ALT87nL0VuhFspdNtYLeGWS5RJZWkiDlt54UZBwMenNLBb2cOoaxN5SyWtsjrGrc/MW2rj/Gn7VdivrKte3p99vx6GDU1xbTWkipcJsZlDgZB4IyOlWobuS6urWNILdZPM2ArAnzBsAAjGDj1PPNTeIb5rjVrmILEI45Si7YlDYXj7wGcfjVc0uZKxftJ+0ULdHcyatW2n3N3HvhRdm7YGeRUBb0GSMn2FMlgjjhV0u4ZWPVED5X65UD9a3nht5Z9MsCJvMWGFofLxt3Odzls89PT0pTnZaE1qzgly/l2+4w7tGiS3jkUq6xlWUjkESNxUCK0jqiKWZjgKBkk1q62x1DUnmtY2kTY7koucKJG+Y47e9ZFXFtxubQk5RTe5YurG4shGblAvmruTDBsj8DT/wCy7z7P53lDb5fmbd67tn97bnOPfFal/Ek3iLTtPk+5CkEDA9+hP/oVWYbi3fUdQvz5vmxRzedvxs5O2NR36cc1g6suVP8AryOJ4mpyJpatX/y69Tm7eCW6uEgt0LySHaqjuamsrFr68FsksSSMcLvJwx9AQD/hVuz/AOJfpE18eJrjMFv6gfxt+XH40nh7KawlwQPLt1aWQk9FA5P15rSU3aTXQ2nVlyzlHpt6/wBafeZrqUdlbgqcHmpLi2mtJFS4TYzKHAyDwRkdKmtwDqsaWbGUO4RTNCpJzxyp3DvWjqczap4mayHlrEbkRKyxKGAB2/exk/nQ5tSS8ipVZKaXS12YVFdHK2mRz3UDy2QtVRkjRYX80MBwd+zrnrzinaZZwvoH228sPMa0LSRBcL56993chT39OKl1rK7Rk8Wox5nF9Px9fxOeggkurhIIF3ySNtVc4yaWO2lmulto13Ss+wLkcnOOvStfQbpzqlxc+XCqxxSTsFhXC4U428fLyR0rOTUZlv4bvbD5kLBlCxKikg55CgZq+aTk0ka+0qOcopLRfjqRTWs1vHG8ybVlzsOQc4OD+oq7qmhXWlWOm3szRS22pQGaCWFiRw21kOQMMpGCPcckGqtzeyXUMMciqBDu27QedzFjn8TXX3gEnwI0x5wPMi16dLcnr5ZhQv8AhuAqve5bv+tbfqbU+Z6T31/Vr8EcWkMsqs0cTuqkBiqkgE9Pzpro8cjJIrI6nDKwwQfQiu10i0Fvp9qstpYYaRriVhdg5WNflb/WYPzEg4+UdwK5HUJTNfyu8cUbsxLCFy6k9yCSc/nTvrYu2lytRWpoFtDcXszXEYlFvbyTLEejso4B9u/4VXaeXU7iGHyrdZHcKpjiWPqcYO0Dj9afWwdLlOiuuhtrO4nv9PkMczwW8hIjsUjWNlHUSBt5weORzUM8kdrNokEdhaslxbxGbdApMu44PJGQfcYNK99AtY560s576YxWse91QuRkDgDJPNQV1miH7B4m1GytxE0MSz7S0Ss3AOBuIzjjp0rO0lxqE1+91DAxSwlKhYEQKR0OFAGffrS5uvlcdunnYxKK2bmCJfB9jMIkEr3MgMgUbmAA4z6VPq08VgunpBZ2x82xieYtCp3kg98cH3GDTuJHP1dstJu9Q2i0ELsxwqG4jVif90sD+lbiRWOn22mB5LBUmiWa4+0QNI8gJOQCEO0ADHBBzVTQlgXxvALN99uJ28piDyuDjr7UXDpcybqzltColaE7s48qdJMfXaTj8ar1saBa291qk5uthSCGSYLJnaxUcZxyR3wPSnajJYy6UrefZyXyTcfZbdo1MZHcbFGQf50XG1qYtTpZzvYyXix5gjcIz5HBPQY611NxbQx+G/7ZXS41vJYljZCimONTx5wTtnHHGM81Us7+ZPBd2wS3zHcRoubaMgjB6gryfc5NK+4rbHNUU53MkjO20Fjk7VAH4AcCtTw7a291qEputhSCB5gsmdrFRxnHJHfA9KrpcDJora1GSxl0pSZ7SS9Wbj7JA0QaMjoRsUZB/nV+/htL6wuZtEls2ghiDvatahJYxxzvxliD74qbhbU51LOd7GS8WPMEbhGfI4J6DHWoK6Wzv5k8F3bBLfMdxGi5toyCMHqCvJ9zk1zjuZJGdtoLHJ2qAPwA4FPq0HQbRWtoMMUzah50aSbLGVl3KDtYYwR71dtbWBtG0Z2gjLS35R2KDLrkcE9xT62F0OcorqbhILpdfhNpbxJZktAY4grJh8YyOSCPWhIrHT7bTA8lgqTRLNcfaIGkeQEnIBCHaABjgg5qVK5VjlqntbdLiQpJcxW/HDShyCfT5VNF6sC304s3324kPlMQeVzx19qji/1yf7wqo6kvQm1Cyk06/ltJ2VpIjhihJB+maa9tss47jzoW8xivlq2XXHcjsD2rQ8U/8jRff9dB/IU/USs3hmwuWhhSZppFZ4oVj3AAYztAzUp+6mVbWxi1PaWc99MYrWPe6oXIyBwBknmt/SEsbzT7a0tJ7S31BmYOl1aiTziTxhyDtGOMDBpPC80tvq91bmOFdsMxIMSsQQvTcQTjjpnFDdriSvY5qitvRVj1TVZJL9bfbb27yhBEI0YqONwQcjnJwM8UmpSWM2kqftFnJfLNx9kgaIGMjuNijIP86d7AYtFFFMQUUUUAbNnez6fcCe0cJIAQGKBsZ+oNLPfS3EeyRYAM5zHbxofzVQabavbxylrqFplCnCBtoJ9z1x9KvTW0E+hm/S3Fq6TiIBGYrICM8biTkfWuY1K0uq3k8BilmyrABjsUM4HQMwGT+JrCrprqG1bQIbq3t/Jc3DRk7yxICg89u/YCuZrSnuyZbIKKKK1ICiiigAooooAKKKKACiiigAooooAKKKKALWmane6NqUGoaXcyWt3A26OaJsMp/wA8EdxxVvUvEmpao8TXD28RifzFFnaRWo3/AN4iJVBb3PNZ9tCk84SW4jt1P/LSQMQP++QT+ldB4ptY4NQ+wWDWexGRI7eGAiXJUclyg3ZJ/vHqOK2jScoc/Z2Ic0pcpK/xL8VtJcyDUYY5buNorqWKxgje4Vl2nzGVAX4PViSDyOa2tf8AiNcwWvhuLwzqEROn6PDBI72SO9tONwfy3kQshxt+ZCM4HPFcjP4euIVuQtxbTT2q7p7eNmLxjv1ABx3wTiorfRpbjTBqDXEEFt5xiZ5C3ykAHoASevbJ9ql0JbW8/wA192o1Ujvf+tH+g3S9c1LRdYTVdNu3hvkZmExAYncCGyGyGyCcg5zmrkPi/WLXXE1ezltrS8SMxZtbGCGNkIIIaNECNkE53A5/AVk3EP2e4aIukm08PGcqw9RWj4Z0201bxBa2t/fW1lC0ibjcCUiT5gNg8tGIJBPJwPcVCjd2G5WTZLrHi/W9d0y307U7pHsrWRpILeK2ihSIsMHaEUADjoOPbmqWqazf6y1q2pT+cbO2S0g+RV2RJwq8AZxnqefeum+I3hbTNC8aajZaDfWkireGGLTIBcNNCOwLOm1ueOHY8ioL34d6lZRX6DUNNuNR0yDz77TYJXae3QY3EnZ5bFcjcFdiKzUouPN31/D9EaNNPl/r+rmdYeMNa07TYtPhuIJrWFi8Ed3Zw3IgJ5JjMiMUyeflxzz1qrp+v6npXiCPXLG7ZNSjkaVbhlVzvOckhgQep6itrRvhxrniLS9Pv9C+z38V5dG1kWFm3WbgZzNlQFUrk7gSMD14ra8A+CNE1TxVqdhrGr6ZfJaW1ztjhe5w7ImRMrLGAUB98nBwpGM07K7fS7JSuku5wmn6rfaTqkWo6bdSW15ExZJojggnr+BBII6EEiruo+KNU1RI47prRY0lE3lW9jBAjuP4mWNFDnk/eB6mup8D+FNNv9Y1qDZa+KntdFmu7WG1F0qtOrKFXGIpGPJ4HBz69K/jDw9a2HhTSr+40b/hHNaubmWKTSy8o3QgDbNsmZnTkleTg4yKHpb+utv0DV3f9bXMg+PfEza7caw+qM15c25tZi0UZjeErt8sxldm3Hbbjv1qno3ibVdBt7q306aL7Pd7fPt7i2iuIpNpypKSKy5GeDjNaMfgmW7tbxtL1zSdQurK3a5ns7eSXzBGvLlWaMRvtHJ2ueBxmtiyuE1f4P8AiK4vbHTftFhcWUVvPDp0EMqKxYMC6IGbO0ZJJJpOyV/T7m/8/wBQ3/rrY4SeZrm4kmkCB5GLMI41RQSc8KoAA9gABUddR8P9JfV/F1nFbT6P9rEq+RZ6xFLJDdMc/KQiMMf7xXtWfpfh+/8AEXij+yNPSEXUkkmfm2RoFBZjk9FABP4U9tA7sx6K1tS0OOzaIWGsafq5kk8rbY+buVuw2yRoTnsVBHvWve/DvUrKK/QahptxqOmQeffabBK7T26DG4k7PLYrkbgrsRRdWuFnsZ1h4w1rTtNi0+G4gmtYWLwR3dnDciAnkmMyIxTJ5+XHPPWqun+INU0vXRrNjePHqAdnM5AYsWzuyCCCDk5BGDms2tTw/aNd6tCsT2fnbvkhvEdklPPGFB/XFaU4c81FbsiTUYtsnh8X6xba5Hq9nLbWl4kZiza2MEMbIcgho0QIwOTncDn8KfqHjTXdU0ZtIuruJdNMqzfZLe0igjVxnDKqKAvU5xjPfNULDSp9UurmOF4YzBG0zl22qFXrjj3pL7S5LG3guBNDcW9xu8uWEnBI6ghgCDz6UezlyKdtP+D/AJ/iPnXNa+v9foekWnjxdM0/Vry98UW+sXF5prWkEMOmmG6kd0CBriUxjcEGeDJJk4+tcLYeMNa07TYtPhuIJrWFi8Ed3Zw3IgJ5JjMiMUyeflxzz1rDroofB0w0e01HVNV07SY74FrOK8aXzLhQcbgI0bauQQC+0HHpzWdluV0sUdL8SatoviJdd068aPU0d3FwyK53MCGJDAg5DHqO9ZjMWYsepOSa09O0aO9af7Xq+nabHCwUyXTu288/dWJXZhx1Ax055retfhjrF7rR0+3vNNZW006pDd+ewhmtwcFlJXIOcjDBcYOcUXS1/rv/AMENb2/r+tTndV1zUNb1l9V1Wdbm8cpukaJAG2gKMqBt6ADpz3rWuPiBr11pi6dP/ZbWaFjHANFswsZYYYqBF8pPHIweKiv/AAhLZadZ6nFq2n3ul3Nx9ma/tjMY4JByVkVow44+bhTkdM10fjLwZoOk+F/Dt5p+s6bFPc6c00vF2xvnDkBkzEQvTGG2c/nSdra+n4XBXvp/XQ5aPxfrkWq6XqSX2LvSIUgspPJT90iZ2jG3DYyeSCaZp3irWNLkvTaXMZS+bddQz28c8UxzkFo5FKEg9DjjtWhF4B1SbxBoGkLPZi4162jubZi7bEV84DnbkH5TnANVtF8Halr+p6pYWElsJ9Mt5biXzZCqusbBSFOMZyR1wMdSKrS/3/8AB/4If8D/AIH/AACaX4heKJ9XtNTl1Vmu7OBreFzDHgRNnKFdu1l5PDAjHHQCoNR8aa7qmitpF1dxLprSrN9kgtIoIlcZwVVFAXqc4xnvmpoPBd1qGrWtjo2o6dqf2hZHae3ldY4FjGXMhkVSoUc5xg9s0Xvht9Cs7XXEm0zxBpTXDW7PA8wi80DPluCI5BkcgjAI6Gp93r/Wv+f4j1/r0/y/AqQ+KtXh8PjRDNBNp6lzHFcWkMxhL/eMbOpaMn/ZI5561HoviTVPD63SaZPGsV4gjuIZoI54pVByNySKynB6HHFdfqzaBZfD7QNch8H6T9q1Oa6jmVri9KKImUKVH2jOfmOck1i6b4BvtQtNOmuNR03TZNWYjTra8lcSXXO0EbUYKCw2guVBPtzTFbRGTpWv3mj+JrfXbTyluoLjzwqxqiE5yV2qAApGRgADBqrqVxb3eqXVxY2ptLeWVnitzJv8pSchd2BnHTOK19J8FarrL6vbWgiGo6SjPLpzlvtEoVtr+WoBDFe4yD6A1f8A+EEOk+KtN0nxJqum2c86xSz2ztM7RbmXEL+XGdshBzjOB3I4y1ZtJfL+vkJtpNv5/L/hzj6u3t+l5a2qGFkkt4xFuD5VlGf4ccHn1rpfiV4a0nw74v1S20bUbMwxXRjTT4vtBlt1x/E0iBTj2dutY2o+GL3TPC2j69PLA1rq5mECIzF18ptrbgRgcnjBP4VCaklIJ01zq+6KK6ndrdQ3Ky4lhQJG20fKoGAMYx0qO1vJ7KRnt2Cl0KMCoYMp6gggg1BRT5Y9iPZwtayJftMguhcKVSVWDAooUAjpgAYFX7HUVl1y2udSeNUjk8xnSELk9edo5Oay6KHFNWFOlGatbpYuXWq3d2jpLINkjbnCqAWx03EDLY96iN5ObEWZf/RxJ5gTA+9jGc9elQUUKMUrJDVOCVkkWze40oWUcezMnmSvu+/xhR7Ac/nRZXv2JZykeZpIzGkm7Hl56nHrjj2zVSijlVrB7ODTVtx8UrwzJLEdrowZTjOCORVq51i/vIZIrm4LpJJ5jDaBlsY7D0A4qlRTcU3dobpwk1JrVGguuaikSxrckIkRhUbV4Q446ew561Ha6re2dv5NtOUj8wS7doPzDGDyPYcVTopckexHsaVrcq+4na9uGv8A7a0mbjzBJvwPvA5zjpTkv7mO8kukkxNJu3vtHO7r9OtVqKfKuxfJC1reXyLZ1O7KbfO+XyPs+No/1ec46fr1pRqt2IUi8xWEY2xs0asyD0DEZH4GqdFLkj2J9lT/AJV9xZt7+4tYmjhdfLYhijorjI7gEHB9xT21S7e8a6kdJJmABaSJG6dMAjA6VToo5Y3vYbpwbu4q5bn1O6uLhbiR0EytvEiRKjZ9SVAz+NOl1e9mgmheRRHOQ0ipEqhiDnPAHNUqKOSPYXsqenurTyNBdc1FIljW5IRIjCo2rwhxx09hz1qK01O5slItjEucgsYEZsHqMkE49qqUUckdrB7GnZrlWvkWRf3CvMyMkZnj8uQRxqoK+mAMDp2o+33HkQQsytHbsWjV0VgpPXqOR7dKrUUcsew/Zw7IuXGq3V1AIpjCUUbVAt41KjOcAhcj8Kh+1zfYfse/9x5nm7MD72MZz16VDRQoxWyBU4JWSRZtr+4tY2jiZTGzBikkauuR3wwIz70JqF0l8bwTMbg5zIwDHkY7+1VqKOWPYPZwbbstSW3IW5jJlMIDA+YoyU961rvVf+JXcQG6jup7p1MjwxeWoAOeflUlifbt1rEopSgpNNkzoxqSUpdP69S3fXv2xogkflQwxiOOPdnHqc+pOTTTf3Js0tfN2wRtvVFAX5vUkck/Wq1FPlVrFKnBJK2xefWL6SR3eYFnkWRjsUZZfunpUU9/c3MTRzS7laUzEYHLnqarUUKEVshKlTW0V9xZfULiW0S2lZXjQbU3RqWUZzgNjIH406+vftjRBI/KhhjEcce7OPU59ScmqlFHLG97DVOCd0v6ZZt9QubWF4YnUxOdxjkjV1z64YEZ96dHqd3F5/ly7TOu2QhQCR6A4yB7CqlFHLF9AdODu2lqammahjULAahNi2tHLKSmdvfHAyeQKr3Wq3d2jpLINkjbnCqAWx03EDLY96p0UuSN72J9jT5+e39bl2PVr2KFY0mxsUoj7F3qvoGxuA+hqBLqaK2lt0fEUxBdcD5sdOetQ0U+WPYpU4LZIfFI8MqSxMVdGDKw7EdDUl1eS3km+fyy2SSUiVMk9ztAz+NQUU7K9yuWN+a2oVcGq3q24hE3yqnlhto3Bf7obGce2ap0UNJ7ilGMviVy99rmtIIvs77POtmifgHKl2yOarQTvbyb4xGTjH7yNXH5MCKfcf6i1/65H/0Nqr0WQ+WOum5autRury4Wed185TuEiRqjZ9SVAz0pbnUru7QpPICrNuYKirub1OAMn3NVKKXLFdCVTgrWitNi3fXv2xogkflQwxiOOPdnHqc+pOTToL9LbT5oYImE1wuySVnyNuc4AxxnjqTVKijlVrC9lDlUbaIfFI8MqSxMVdGDKw7EdDUs99PczrNIyLKrbg8caoc5znKgZPvVeinZXuW4xbu1qW7jU7q6DecyEscsyxIpf6kDJ/GnnWL83iXXnnzY02JhV2quMY24xj8Ko0UuSPYj2VO1uVfcT2t5PZyO9uwUupRgUDBlPUEEYxUcsjSyF3Cgt1CIFH5DgUyinZXuXyxT5rahWzq/iA6loukaTBbC2tNMicBd+4yyu2ZJCcDrhQB2Cjk1jUUyi1/aN35Xl+b8nk+RjaPubt2OnrzVWiigCW3uJrS4Se2kaKVDlXU4IqS41C4uSpkMa7TuHlRLHz6/KBk+9VqKBGmfEOplpGE6q0qlZGWFFMgIx8xAy341bvtfkSPT106dT5FoiMWhBMb852lhkHpyKwaKVkMntry4tLtbm3lKTKSd/XOeuc9alTVbuO8W6iaOKVVK/u4URSD1BUDB69xVOimBcutVvL23jt7iVTDGxZEWNVCk+gAGPpUNzdz3ZiNw+/yo1iTgDCjoOKhooAuQard29usCOjRISUWWJJNhPXbuBx+FRwX1xbXy3kMpFwrFg5APJ781XooESwXM1rcrPbyNHKpyHU4Iqa41K5uVVZDEFDbtscKICfUhQAfxqpRQMvnW9RN7JdG5Jlkj8p8qu0pjG3bjGPbFRWmo3NlHIlu6+XLjekkaurY6cMCKq0UWQDncySM7bQWOTtUAfgBwKfb3E1pcJPbSNHKhyrKcEVFRQItXGo3NyoWRo1UNuxFEkYJ9TtAyakk1e9lgkhaRQsgxIUiRWk/3mABP4mqNFFkMtWmo3NlHIlu6+XLjekkaurY6cMCKru5kkZ22gscnaoA/ADgU2igCe0vJ7G4E9rJ5cgBGcAgg8EEHgj61Yl1q/mWBXmXbbyeZEqxqoRvYAY7dOlUKKALY1K7DXREvN5kT/KPnyc+nHPpSward29usCOjRISUWWJJNhPXbuBx+FU6KLIBzu0sjPIxZmOWJ7mm0UUAXLnVLq8CfamjkZMYdoU3nAwMtjJ/EmpX1y9ktxA/2YxDJVPskQCk9SPl4PuKzqKLIC7b6ve2qIsMiApwjtEjOn+6xGR+BqG2vLi0u1ubeUpMpJ39c565z1qCigRa/tG5F4l1GyQzJ91oI1jx+CgDvRc6hcXaBJTGEzu2xQpGCfU7QMn61VooshhRRRQIKKKKANvT4rWa8Rb+4+zwDlmCkk+wwDVzWLhLpU8m6tvIh+WG1hEnyD1+ZQCfU9az7a1mvJvKtoy74JwOMAdyewqSbTrqBUZowySNtV4nWRS3plSRn2rmNS/IbQ+Ho7QahAZkmaUjZJyCoGM7OvH0965Wt6XSL2FJGeJT5YzIqyKzIPVlByPxFYNaU92TIKKKK1ICiiigAooooAKKKKACiiigAooooAKKKKAFHUVt6tqsEnjD+0rRvOhSWN1OCu7aFyOfpWHRWsasoKy7p/cS4pu79DpWvtOtLzVdQt7wTm9ikSK38tgymTrvyNvHPQnNZ7XsB8IR2Ik/0gXrSlMH7uwDOenWsqiqdZtNJWVrfjclU0tf67BVnTroWWqWt0ylxBMkhUHGdrA4/Sq1X9I02DU7ow3Gq2emcDa92szK5zjaPKjc5+oA96yjdPQuVmrM67xhrGlt8RX8Y6Jq9rqCy6hHdpY+VPHMmCGw+6MJ1GPlY9a1Ne8ZxTXur6pofiXSreDUo5v8ARF8PRpelZc5heQQ7SOcF/NJPXBPFcF4j0G68MeIrzRr+SGS4s32SPASUJwDwSAe/pUU2l+TodrqX26zk+0SvH9ljmzPFtx8zpjhTng55wayUY8iS2/zsaXfNfr/kd/4I8WeGPBXhtoLiS51K61/db6qts8kQsbXBAC5ADy5bdkZGARkZ5y/B2q6H4S+I13nU/tWjy29xaR6ikDjCyIQrmMjdxkZAHrjPfha0NG0PUfEF49rpFv8AaJo4XnZd6rhEGWOWIHA7dappO7fb8P8AgakrTRd19/8AVvwOs8IzaLoF9r9neeI7B4dS0Oe0hvIoLkxLK7LhWBiDjhSchSPenvrehaR4N0vQZ72PxC0OsrfyGCORYYoAoDRL5qoxL9SMAcda4Cin1v6fg7h0/rqrHtkHjvS4Ne8QXV545nu9KvbG5h03S4IblIrcuhCK8ZQIuB8o27hnkkda4Twrqmlt4J8Q+HdU1GPTJdQe3nt7maKR4i0THKN5aswyG4OD0rjqKnlX5fg7jcm/z/Q7T4dyaRonjuy1fVfEFjbW2m3e45huWa4UZ+ZAsR4/3tp9qqwSw6H40h1DSfFlvE/mPLFf2UE5EDHOA6yRocHODgNwTwelcrRT63J6Ndz03xT44srmDw9eT3On634j06/NzcahY2bWySxAqVjYsiFmyOuwADp3zJr3jOKa91fVND8S6VbwalHN/oi+Ho0vSsucwvIIdpHOC/mknrgnivLqKXKrW/rX/hiuZ3uFbPhmS1tNZt769vYrdIJMlGR2ZhjttUj8yKxqK2p1HTmppbGc480XF9TesZ7PTrjUd19DMtzZSxo0SSfeJGFO5R/h71BdX1vJ4TsLNJM3EM8rum08A4xz0pNY8O3eiWOlXV3JC6ara/aoBGxJVNxXDZAwcqemaZrOhXWhfYlv2iE13apdCFWJeJHztD8YBIw2MngjOOlU6z5eS2m343/NC9mr83z/AAt+pmV3GrXui+LtD0KS41qHSL7S7FbCe3uoJnEqISVeNo0YEkNghtuCOuK5fUdD1HSbOwutQt/Kh1GHz7Vt6t5iZxnAJI5HQ4NZ9Y7q39djTzO98Ka9Y6f4O1PTtP18eHdYkvUlj1NopVaa3CkGLfCrunOGwOD0zXe2PiDRfEupmOPWru/jtPBl1bX97PG5l37vmc7+W65HJ4wOteC1paJqWp6fdTQ6NL5cuowtYyDap8xJMAp8w4zxzwR60pR5lb+tmv1BS5Wn/W6f6HQ6nqWlaV8Nx4a07U4tWurrUhfTz28UqRQqiFFQeaqsWO4kkLjtk1Nr+o6R4k8EeHVj1i2sr7RrGS2msrmKYtKQ5ZSjJGycg/xFcH865qfw5qtt4o/4R2a126r9oW1+z+Yp/eEgBd2dvUjnOKuaj4H17S7S7ubi3tpY7Jtt19kvoLlrc5x+8WJ2Kc8ZIHPFLRq999fwt+Q9U7dtPvd/zO70TxN4Xl8SeCdf1LXVsRollFaXVm1rM8u6MsA6lVKlDuBPOR6Gua8N+IdN07VPGM1zdGJNS0q7t7RgjHzJJHUqvA4yAeTgetcTXR+GPB7+KnMFjrOmwX22R1s7gTiRlRSxIZYinQHqwPFOSWrfn+O4k7WXp+GxP8PfEtt4Z8QXEl/8ttfWU1lJL5Cz+TvHDmNuHAYDKnqM9elWfE2vTSeHf7Kj8RaTqFtJdCc2ulaMtogIUgOzeTEd2DjABGD14rjKv6vpf9kXwtvt1nfZiSTzbKbzI/mUHbnA+YZwR2INElff+uoLTb+uhuazrNhd/DPwzpNvPvvbG4vHuItjDYJGQockYOcHoT710ieNLfUtE0FrfWdI0e+0m0S0lTUtES6dvLYlJIpfJkPQj5SVwwOOua8woph/X43PQPC3ibStL8War401vUZL/VbeR5dPtkhaFrydyR5kmwbUQAklc5OccjrR8Xatod34ytPE2h3E0v22Vby8sZtxktZg2XTeRh1J5UgnjggYrjakt4JLq5it4F3SyuERc4yScAc0RVmmumwpap36nW/Ee40nWfFWoeING1u2vI9QuPNFoIZkmiBGTu3RhOCMfKxrH1G20CLwto8+m3s82szGb+0rd1ISEBv3W07RnK5J+Zvwqlq2lXuh6tc6ZqkPkXlq5jmj3htrDtlSQfwNU6mKSilHYpt813uFFFaGjaHqPiC8e10i3+0TRwvOy71XCIMscsQOB261QjPoqW2hFxdRQtLHAJHCGWUnamTjccAnA9gas61o93oGtXWl6igS5tZCjhTkH0IPcEYIPoRQIo0UUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBYuP9Ra/wDXI/8AobVXqxcf6i1/65H/ANDaq9AwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAakSySSCOEMzyfKFXq3tWvelNK0saasm+7aUSzlDxEQOFB9eeTWbZ3s+n3AntHCSAEBigbGfqDT5NRnkA3JbjawYFLaNTkfRf0rmNTQs4xo9i99eEie5iZLeDuQwwXb29PWuTroJ9ZvLlme4+zyO4wztaxFj+O3Nc/WlPdkyCiiitSAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACprT/j+g/66L/OoaKqLtJMTV1Y7T4u/8lb1/wD6+B/6AtWPEzRXvwo8OapJZWMN7NfXUUk1rZRW5dVCbQ3lqoOMnrXO6r4t1jXFg/taW2upICm2d7KHzm2jCh5Nm9xjsxIPerlx8QNeutMXTp/7LazQsY4BotmFjLDDFQIvlJ45GDxWSi1BR7F3vLmOv8GQaBrnhrS9H0a/0bTfEjyyJPDrGkLci+YsdgWZlYRjbhcAA5/A034SX15pvjTV9Me2sovKsr53U2kUjI6xkbRIyl9nH3d209wcmuK0zxprukQQx2FzChtwRBNJZwyTQA54jlZC6dT90jGaoaXrmpaLrCarpt28N8jMwmIDE7gQ2Q2Q2QTkHOc05K7fmn/X9fISdkvJpnX+BI7XxZ4uubrxFFpoTTtMnu0hFmlvBI0YyvmJAgLAE7jhSSFxyOKZ4pufD974Ojf+0dFufEEV78p0fT5LVHtmXkODDGpZWAwcZweprmz4n1Vdbg1e2mhsr63GI5LC1itQOv8ADEqqc5IORyODkUmq+JdS1m3EF41skIfzDHa2UNsrP03MIkUMeTyc9aGr2/rrcadv68ilNp97b2NveT2k8VrdbhBO8TBJtpw21iMNg8HHSvS9BsbLQl8M2WsNZPPrCxTpZReH4L1pY5HwvmTSurITyMR9APWvPLvXtSv9E0/SLu58yx00yG1i8tR5fmNufkDJyfUn2rRsvHniLT7K0trW+jC2IK2kr2kLzW4JyRHKyF0GewYVf+f4Evb5Hfa9p+n+EPCPiWTStGsJp7XxS9nb3F3aJcG3h8vIX94GBHGPmz1z15q3p+j6P/bn9rNoVjM174Nk1STTzADEtwDjcifwA7cgLjGTjFcunxEuP+Fe38ct/FNrl/rn2y5hnskljmjMWCzIyGM/OBxjIIyBUXhHx5Pb+Idc1rXtUdL640ae2tZhH0lwvloqouFHHAwFFY8suVp72/8AbLfn+JpdOSfn/wC3f5fgWraws/F/gfT9Q1O2srC8XxBFprXVlax2wlhlXJyiAKWXGd2BweSa1vEC+E7TUfEmi6jd+HbaytoZoNOtrPTpxdwXEZxHvnMALkkENudhzx615vq/ifVdbtbe2v54hbWxZore2toreJWbq2yNVXcfXGatXfjjX7+2eK8u4pXki8mS5a0h+0umMbWn2eYwxxy3IqpRb2/rRf5N/MlO1v66v/hvkelafDpg8W+AtBOhaQ9nrGkW5vzJYxtJMzhwW343K3H3lIJPUnjHL2dnaeHfAGtazaWVreajHrQ06OS8t0uFt4gpbcI3DLliMZI7cVzEfi/XItV0vUkvsXekQpBZSeSn7pEztGNuGxk8kE0zTvFWsaXJem0uYyl8266hnt454pjnILRyKUJB6HHHam02215/mmvwuvmCdrX8vyaf42fyO0+JEkN6ngOWe2is4Z9IiaSKJdqKGlYttGeAckgZ4B7VkfFKaW1+MGtSKq5gu18pZY1ddqquwbWBBXAHBBBFYGveJ9Y8Ty20muXhu2tYvJhJjVdiZJ2/KBxknHp06U/xJ4gPiS5tLy4tvKvY7WO3uZg+Rcsg2rJjHynaFB5OSM8ZxRZ3v5v8Xf8AC34h5eS/DT8f0O7+IfiK9/4Qvwcvkabi80hjL/xK7bK5kYfIfLzH/wAA2889asw2nh/w1pfhRZ7rw7Hb31nHe6kNTsJbm4uQ7EMqOsLiMKAVGxlOQSfWvPF8W6uNBj0aSW2nsYldYUubKGZoQ/LbHdC6ZPPykc806w8Ya1p2mxafDcQTWsLF4I7uzhuRATyTGZEYpk8/LjnnrTtv63/PT8RdF6W/LX8DrvA+m6LrHj7WfDdtYJqfh6+83ZqBjVZrCFWylwJHAKADAYHGc4IPAK+Ir1vD3xbt9K0zQrHS7XT5YrOGOewhmeaPev752dW3O3UP1AOARzni4fFOs2+n6nZw3rJFqzBr0hF3z85wXxuxnqAcHuKj1PxDqmsW9hDqd2bgadD5FqzIodI85C7wNzAdsk47YojdSi+34/1t/VglqpLv/X9f8OeleJNYubr9ouGwkis1hg8RQFWisYY5T+8X70qoHbr/ABMafHJpt7q/xEsPD9pdWepyW13JPPd3C3EckUcu6VUVUTyy2Bgnf6e9cBeeOde1C/tb+7uLZ761mjnjuxYQLMXT7paQIGfGBwxIOOaL7x1r+oW93DLcWsK32ftTWlhb2z3AJyQ7xIrMCeSCcGoUGoKPk196X+RfNebk+6f3XOz0GxstCXwzZaw1k8+sLFOllF4fgvWljkfC+ZNK6shPIxH0A9af4W0u20T9oHVNNsE2WtqdQjhTJO1BDJgZPJwOK4qy8eeItPsrS2tb6MLYgraSvaQvNbgnJEcrIXQZ7BhVMeJ9ZXxSfEaXzpqzTGc3KKqneepwBjnJ4xj2qpK7fndfft9xCdl934b/AHlGyvJdPvI7qBYXkjOVWeBJkPGOUcFT+INdd8VLW0s/HSraWlvaxPY2srRWsKxJuaFSxCqABkkngVgSeJr+XVxqTw6abgIUx/ZVt5RB7mLy9hbn7xXPvVjW/Gut+IQP7Wks5JF2bZ49Ot4ZQEGFAkSMMABxjOOKeujDv6f5He+IrHRfEHh3U77wHd6HJp9jaLNNpMuki3vLVOAWE5G+RgeSd+O3PAKw2nh/w1pfhRZ7rw7Hb31nHe6kNTsJbm4uQ7EMqOsLiMKAVGxlOQSfWuAuvGuvXenXFlJdQpFdAC5aC0hhkuADnEkiIHfnn5ic02w8Ya1p2mxafDcQTWsLF4I7uzhuRATyTGZEYpk8/LjnnrStb+vX/gB0/ry/rpuRX+mRX3i28sPCMVxqds1xILFYYXeSSIElTtxuztGTx2NSeE9Qn0zxVYvBHbszzxxMLm1jnABdc4EikKePvDBHrUGl+JNW0XxEuu6deNHqaO7i4ZFc7mBDEhgQchj1Hes3e3mb8kNnORxzVQ91ryFP3kz0r4i3cmufGS80K9+xwWb6usRmisYI5VBYKS0oQO3BP3mP6VpeIF8J2mo+JNF1G78O21lbQzQadbWenTi7guIziPfOYAXJIIbc7Dnj1rzrW/FereIlH9sSW1xKGDG4FlCkzkDA3SqgduPUmp7vxxr9/bPFeXcUryReTJctaQ/aXTGNrT7PMYY45bkVmoNQUe3+S1L5ry5j0H4W6Dp3ivwrNJrHhpbttCmaaymt1jibUn2FvskhwDIeA3cgZHAODV+FXiG7uPHGsBrLTbZZrG9uDDFpsC+Uwj4RTs3KgwBszg85BJOeBPizXPsOmWaag8NvpMhls0gRY/KcnO/5QCzZ/ibJoXxbraeKn8SR3gj1aR2keeOGNQzMMNlAu05BORjnJz1qpJtvzTX/AAf67ErRLyaf47f13KWp6pcatcie6jtY3VdoFrZxWy4/3YlUE89cZrrPioAdb0SVwBczaDYvc+vmeXjn32ha5i61dtT1SG71S3tnRCokis7aK0DoDkjEaBQTyN2CfripPEuvT+JfEV3q1zGsTTsNkKfdiRQFRB7BQB+FPol5/wBfn+AdW/L/AC/yMqiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCxcf6i1/wCuR/8AQ2qvVi4/1Fr/ANcj/wChtVegYUUUUCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKANi1e3jlLXULTKFOEDbQT7nrj6Velt7efRPt4thbMk4j2xs22QEZONxJBH1xVTT4rWa8Rb+4+zwDlmCkk+wwDV3VbiO6MYS8t1toiFit4FkPlr3PzKAT6nPNcxqPjs4ptPuJbnT/sUaxb4bgs48xuy/McNn2ArlK6mzltdNiumN6lx50LRrDGjjcT0LbgBx14zXLVpDdky2CiiitSAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCxcf6i1/65H/0Nqr1YuP8AUWv/AFyP/obVXoGFFFFAgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDXtrWa8m8q2jLvgnA4wB3J7Cn3FhcWsaySopjY4Ekbq6k+mVJGfaoYlkkkEcIZnk+UKvVvatqeGKzso9GadPtM86vcSFvkh7Bc+ozya5jUy0sLqSwkvUiJt42CtJkDBP8+tYtd68TPomqQwNALeMRJCBcxngMSSSGwCevP0rgq0p7smQUUUVqQFFFFABUslrcQhjLBIgVgrFkIwSM4PvitHw5Zi81aNZIreWIEeYJptmF6kgbgSQAfUetaniKYjSo/MtbJXupHuJPLuNzAk4VgA5zkD0I57Um7DWpytX00a8a3inIgjjmG6My3MaFhnGcMwNUK6LUHsl0XRvtlvPK32dsGKcIAN59Uah6AtzHh065uLt7aBFlkjUs2yRSMAZJDA4P4GqtdJ4VutuqXEcEaLEYJXUSRo7j5em/bkj26e1UdNWTVNSMkotUWCFpHP2dQqqvfYoAY896L6h0Mmiusigsr/Tra6VFlZNQjiLmzSAMp6qVQkN260yRYbzVtYsJLO3hggjleIpCqtGU6HcBkg+hz1pcw7HLUV1KRWOn22mB5LBUmiWa4+0QNI8gJOQCEO0ADHBBzXO3qwLfTizffbiQ+UxB5XPHX2p31sLoFraT3s/k2sZkfBOBxgDqSTwB70+5065tIllmRTE52rJHIsiE+m5SRn2qGFZZJBFAGZ5PlCp1bnp71s6iItI0X+yN4lvJJRLc7TlYsAgID3PPP5UPQEYVFFX7OTbpN+n2D7RvCf6Ttz9n59ccZ6dRTAoU5EaSRUQZZiAB6mm1b0ud7fUYWjEZLOqnzI1cYyOzA4Pv1prcT0RFdW01ndSW9ymyWNtrrkHB+oqGtzxVdSSa/ewMsIRJjgrCisfqwGT+JqTVp4rBdPSCztj5tjE8xaFTvJB744PuMGoTbimU1q0c/RXS2UMNkNOhuzCXuwriFbFJiys2BudiCCf9npUl9Db6Vpt81tawM8epmKNpYhIVTbnHzZz+NNuwkrnLUV0l7Fptj4tha7gVbSSJJHjRcqrMnXb6Z5xVfW7YraQXkE9ldWzyFUlgthCQRztZQB+uaLhYorpjjTVvZ7iGCOQsIlfcWk29cBQcenOKo10epahMfC+lkpbfvfODYtY+PmA4+X5fqMUpEVg+jW0VnBKl1EkkxkiV2kLNggMRlcexFGoaWOboro7KytLfWNbheJJ4bW3mMYcZxtYY57H3FO0u5S50u/uJbOzM0BhCN9mTGC+DxjHTvihO4NWOaorsdY0+0mSRFhhtxHqotlaKMKQhXnJHXnnmoL4aZFcahaTy2EcMaOkEcUD+ajr93L7OenOWI5pc2lx8upytFblu0Vt4RF0LeF7j7cUWSSMNgbAehHP0PHNY88vnztJ5aR7uSqDCg+w7VXWwug+1t0uJCklzFb8cNKHIJ9PlU07ULKTTr+W0nZWkiOGKEkH6ZqGL/XJ/vCtjxFC1x4xuYYwC8kyqoJ4yQBR1QdGYlFddDbWdxPf6fIY5ngt5CRHYpGsbKOokDbzg8cjmuRpJ3Cxf07SjqZ2Q3duk2GIik37iAMk5CkfrVCtnwr/AMh9P+uUv/oBrKhlaCZZECFl6B0Dj8iCDR1DoPurb7LN5fnQzfKG3QtuXkZxn1HeoK2PEscUWsgRRJGphiYrGgUZKAngcVo38NpfWFzNoktm0EMQd7VrUJLGOOd+MsQffFK+gdTnUs53sZLxY8wRuEZ8jgnoMdagrpbO/mTwXdsEt8x3EaLm2jIIweoK8n3OTUOmxQf2LdajI9pHcNcCJWuISyICCxwiqRk+4wMcU77/ANdg7GBRWlrZsXuYZLB4nLRL5/koyoJO+0EDAPB6VUsoknv7eGU7UkkVWOegJwaa1E9B9hYS6hM8ULIrJG0h3kjhRk/jVWuxsp1XXtVso7OCKKC3nWPZEFZAoxkt1bPvnrVdIrHT7bTA8lgqTRLNcfaIGkeQEnIBCHaABjgg5qeb+vvKt/X3HLU5EaSRUQZZiAB6mpb1YFvpxZvvtxIfKYg8rnjr7VJpc72+owtGIyWdVPmRq4xkdmBwffrVLUl6EV1bTWd1Jb3KbJY22uuQcH6ioa6HX5WvPFk1lN5SRG6C71hRWAJxksBk9e5qzfDTIrjULSeWwjhjR0gjigfzUdfu5fZz05yxHNQpe6mU1rY5Wp7SznvpjFax73VC5GQOAMk810nhuyg1PTXa708SmycvC8YVTcHGfKb+90z9Ki8NX0r6zdZht4w0MzlVt0G07eg4yBx06U27XElexzNFbeirHqmqySX62+23t3lCCIRoxUcbgg5HOTgZ4pNSksZtJU/aLOS+Wbj7JA0QMZHcbFGQf5072AxaKK6lIrHT7bTA8lgqTRLNcfaIGkeQEnIBCHaABjgg5psDlqK6NzaWeg3NxYQwT41EpDNNCHPl7cgYYfzqn4ltobbWP9HjWJJIY5CiDCgsoJwPrSuOxkUUo689K6i/htL6wuZtEls2ghiDvatahJYxxzvxliD74obsJas5aiuphs7dvEHh+P7PEUltomkTYMOeckjvUP7u08O3dxFaW7zDUDGskkKvsXb0wQRj60N/187Ba5zlFdZHp1lPqdvcyxQxB9ON28JBEe8ZHRedvGcD8qzdSksZtJU/aLOS+Wbj7JA0QMZHcbFGQf50XCxi0V0GrTxWC6ekFnbHzbGJ5i0KneSD3xwfcYNc/TAntLOe+mMVrHvdULkZA4AyTzUFdD4QuXj1CaJViK/Z5Xy0Sls7f7xGce2cVDoqx6pqskl+tvtt7d5QgiEaMVHG4IORzk4GeKTdn/XmHQxKK2tRksZdKVvPs5L5JuPstu0amMjuNijIP861ri2hj8N/2yulxreSxLGyFFMcanjzgnbOOOMZ5pXsrhbU5ZLOd7GS8WPMEbhGfI4J6DHWoK6Wzv5k8F3bBLfMdxGi5toyCMHqCvJ9zk1DpsUH9i3WoyPaR3DXAiVriEsiAgscIqkZPuMDHFO+/wDXYOxgUVpa2bF7mGSweJy0S+f5KMqCTvtBAwDwelZtNAFFFFAgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAsXH+otf+uR/9Daq9WLj/UWv/XI/+htVegYUUUUCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKANmzvZ9PuBPaOEkAIDFA2M/UGlnvpbiPZIkAGc5jt40P5qoNNtXt45S11C0yhThA20E+564+laBtbe50lb0WwtmW4WLajMUkBGTjcScj61z7muxnR3c0VtNbxviKfb5i4HzYORWRXX6tZJDJdix0+1a3ibAlinaR0HqQHOPxFchV09SZBRRRWpAUUUUASwXEtszNA+wujITj+EjBH5UXFzLdOrTtuKIsa8AYUDAHHtW54a8H3Xiazv7uG/sbG308wiaS8aQD96+xcBEYnnrVvxJ8OtW8NWpmnuLK9KXx0+aOzd3aKfaGCHKjOQeCufTg8UPf+v66/iNf1/XyOTq+ms3i28UBMEkcI2xiW2jcqM5xllJrevfh3qVlFfoNQ0241HTIPPvtNgldp7dBjcSdnlsVyNwV2IpmneAb2+s9Mlm1LTdPm1diNPtbuR1kuAG27htQqoLcAuVzjjNJWewbanPRahcwXwvIHWKYHgxxqo6Y+6BjHtinrqt3HeLdRNHFKqlf3UKIpB6gqBg9e4rVufCL6frupaXq2s6Xp76dOYJJZnlZXcE/cVI2cjjrtAHen3mmnwbfxLqmnaXrkF7bJcWkzTT+VJGxOHXy3jYHIIIYZGOlJNOzCzTaKNtrl01xbRXUyraJcJK0aRKqrg9QFHHfp1o1XW7i6u71YZlNvNI3zLEqs6Z4BbG4jpwTXUfEi10jSPE8/h/QvDNjBmK3aKdJbqSYM8aOQA0pU5LEfdPHvzWde/DvUrKK/QahptxqOmQeffabBK7T26DG4k7PLYrkbgrsRRpuxq/TyOeg1W7t7dYEdGiQkossSSbCeu3cDj8Kqu7SyM8jFmY5Ynua6rRvhxrniLS9Pv9C+z38V5dG1kWFm3WbgZzNlQFUrk7gSMD14ra8A+CNE1TxVqdhrGr6ZfJaW1ztjhe5w7ImRMrLGAUB98nBwpGMt2V32uxLW3mcFY39zpt0LizcRygEBiitgH6g0txqE1zF5ciW4Gc5jtY0P5qoNO1OygsLkRWup2upoV3Ga1WVVB/u/vUQ5/DHPWk0vTLvWtVttN02Hzru6kEUMe4LuY9BkkAfiadri2KlWIb24gtLi2ik2w3G3zV2g7tpyOe34V283wP8AiHb28k03h7bHGpd2+225wAMn/lpXAUrp6Ds1qFKDg5HWrdjHbPb3huSodYcw7mx824dPXjPFGqx28Wq3CWRU26viMq24Y+velze9ymSqJz5Lf1p/mJeandX4H2to3bIJfyUDnjHLAZP4morm7nuzEbh9/lRrEnAGFHQcVDWxd2+nJZTtAY/NVLcpiXJyVO/jPPOM+lKUlHoE6ig0mt/81/mVodav4IYo45lAh4iYxKXj9lYjI/A1HcaneXcUkdxNvWWbz3G0DL4xngenbpVSt/wbpY1TxNZRJeaXDcfaYhBb6pHM8V05cYjIjRuCcA7sDB61aV2aN2RlyapeS3a3Mk2ZVQRg7RjaBjBGMEY9aS61G5vI0jndfLjJKxxxrGoJ6naoAz71tL4Y1PXvHWoaRaQ2cVzHcTtOYj5dtbqjHewJ+7GuOO+MDGeKg1fwrPpmjQavbX9lqmmzTNb/AGqyMm1JQM7GWREYHHI4wR0NSmmkyrNNoyZLuea1htpHzFBu8tcD5dxyeant9ZvrWFIoZl2xEmMtGrNHnrtJBK/hiug8QaPLp3gPRriOXRLyymuZxHe2MMq3DsAu5JDIikquRjA7mrFt8L9TuX0qAatpEd5rFmt3YWkk0gknVgSF+5tVuMfMQCehPOHpqL+vxschBe3FuZjDIQZ4zHISAdynqOfp1pYL24toJYYZNsc23eNoOdpyP1re8B6BDrnji0sNSRvskJkuLtM4JjiUu6/jtx+NVbXxBMniWe+tbLTYxeTHNvJp8E0Uals7UR0ZVx0yADTSvJJdf6X6ieibfQz7nVr27iljuJt6TTec42KMvjGeB6U6XWL6eMrLKrFl2NIYk8xh0wXxuP51v/FKztdP+KGuWthbQ2tvHOBHDBGERBsXgKOBS+INHl07wHo1xHLol5ZTXM4jvbGGVbh2AXckhkRSVXIxgdzURacVIp35rHL/AGuf7CLPf+4Enm7MD72MZz16VDXSW/gyU6FZarqer6ZpUGoF/saXbSl5wrbSwEcb7RnjLFfyra+GXhLR/EGt3sOuXtkwgtLlltGefduRMiUNGpUqD/tZOPunjNNpXfb9BLW39bnA1cudUu7wJ9okV2TGJPKUPwMDLgbj+JrStPCk2qeIItJ0LUbLVGeMyvcw+bHDCiglmcyohAUDJOPpk8Uax4Un0vSIdWttQsdV06SdrY3Vi0m2OUDOxhIiMCRyDjBHQ0XQWKh8Q6mWkYTqrSqVkZYUUyAjHzEDLfjWZXX63p1td/DfQfEFrbwwTRzy6ZeeUgUSMgDxuQP4ijEE99oNchRpdoOiZLbXM1ncpcW0hjljOVYdqlbUZ2uhcMluZMYx9mj2n/gO3BPvjNVaKYi9eaveX4H2loWYYw628asMdPmCg0SaveywSQtIoWQYkKRIrSf7zAAn8TVGilZDLVpqNzZRyJbuvly43pJGrq2OnDAiiDUrq2klaF1UTf6yMxqUbvyhG36ccVVopiJrm6lu5A85BIGAFUKFHoAAAKiBwcjrSUUDNP8A4SDUwHxcDdImyR/KTdIMYwzYy3HrUEGq3dvbrAjo0SElFliSTYT127gcfhVOiiyAc7tLIzyMWZjlie5pAcHI60lFAi3eandX4H2to3bIJfyUVzgY5YDJ/E0+XWL6eMrLKrFl2NIYk8xh0wXxuP51Rooshls6neeTbRLOUS1bdEEAXa3rx1PuaBql4NTOoLLtumYsXVFGSevGMc/SqlFAi1/aNyLxLqNkhmT7rQRrHj8FAHei51C4u0CSmMJndtihSME+p2gZP1qrRRZDCrkGq3dvbrAjo0SElFliSTYT127gcfhVOigRYe+uZLVreSUtE8vnMCBy+MZz1pLu8nvphLdP5jhAgO0DgDAHFQUUDFBIIIOCOhFXZNXvZYJIWkULIMSFIkVpP95gAT+JqjRQBo22vajaJCsE4XyOImMSFkHoGIzj26VZg1jyPDssKSqbqS88x43iDqy7epBBXrWLRSaTAttqd6+oC9Nw4uF+668YGMYAHAGOMdKS51C4u0CSmMJndtihSME+p2gZP1qrRTsgJrm7nuzEbh9/lRrEnAGFHQcVDRRQImtbueyuVuLWQxyp0YDP6HrUn9o3IvEuo2SGZPutBGsePwUAd6q0UAW7jUrm5VVkMQUNu2xwogJ9SFAB/GpDreom9kujckyyR+U+VXaUxjbtxjHtiqFFKyGWrTUbmyjkS3dfLlxvSSNXVsdOGBFEGpXVtJK0Lqom/wBZGY1KN35Qjb9OOKq0UxE1zdS3cgecgkDACqFCj0AAAFQ0UUDCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/UWv/XI/wDobVXqxcf6i1/65H/0Nqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBt6fFazXiLf3H2eAcswUkn2GAau6rcR3RjCXluttEQsVvAsh8te5+ZQCfU55rOtrWa8m8q2jLvgnA4wB3J7Cn3FhcWsaySopjY4Ekbq6k+mVJGfauY1L1nJaaWLmUXiXLyQtEkcSOM7hjLbgBge2a5etyXTLqCHzJo1T5d2wyLvA9SmdwH4Vh1pTJkFFFFakBRRRQB2XhDXtN0vwh4ksr+58q4vnsjbp5bNvEc25+QCBgc84z2rrPE3xB0OS31OfSbsXdwfFseq28RikQSwpHjdkqMfMMYPPtXkNFHW/8AXT/JAtL+f+TX6nqOveM4pr3V9U0PxLpVvBqUc3+iL4ejS9Ky5zC8gh2kc4L+aSeuCeKisb3RPFeoeC559WFhfaWkFhPYmCVnnEcuY2hZVK5YNg72XBHevM63dK8Za3ottFDp1zDGICzQSSWkMksBPXy5HQsnr8pHPNKKUbW6W/C/+YSvJNd/1/4Y9G1vxHY2ut+NLHT9eTw5rMuutIupeXLmaAZVohJEjOmGG7pg+tcv8TfEem+IR4dGm6rc6rJZaYLe6ubpXEjyh2JJLcnOcjk8Ed64Z5HlkaSVmd2JZmY5JJ6kmm1MYWST6W/BWLcrttdb/i7nb+MvFNlc/FOHxDo0gvLe3+xyISrIHaKOMFcMAR8ykdK2te8ZxTXur6pofiXSreDUo5v9EXw9Gl6VlzmF5BDtI5wX80k9cE8V5dRVNJq3r+JKdn934bHp3gjxZ4Y8FeG2guJLnUrrX91vqq2zyRCxtcEALkAPLlt2RkYBGRnnL8HarofhL4jXedT+1aPLb3FpHqKQOMLIhCuYyN3GRkAeuM9+FooaTbb6q3y/r8wWit8/n/X5F3U7K3sLoRWmqWupoV3edapKqg+mJEQ5/DHPWm6XcWlpqttPqVl9vtI5A01r5pi85e67xyufUVUoprQT1O/m8XfDx7eRIfhh5UjKQkn/AAkFw2044ONvOPSuAoopWsO4UUUUxBRRRQBs6XbaBL4a1mbVb2eHVoRD/ZlvGpKTksRJuO04wuCOV/GpvAf/ACUbw5/2FLb/ANGrWBWvofifVPDjNJpD20Mxbcs72UMssZxjKSOhZP8AgJFVF2lzCkrxsdXY67YaJ8UvFcesNJFZamb/AE+WeNdxg8xzh9vcAgZA5xnHpVK/1DSdN+Hq+GLDVoNSuLvVFvLi6hhlWGBFQooHmIrEncSSF6DHNcY8jyyNJKzO7EszMckk9STTayjG0Un2S+53/M0crybXn+Kt+R6Hqv8AYM/w10nQ4PFulveafdXNxJi3vAsgcLtVSYOvynrge9XLTxfocXj/AMBak99i00jTbaC9k8l/3Tpv3DG3LYyOQCK8woq1o7+d/wALEPVW8mvvdzuPA+u2dj8VTc3E4jsNQkuLWSYnaFSYMgfnoAWB59K5S8srjRNbms76IpcWU5jlQ/3lbB/lVKilFclrdNP8v1HJ8179f6/yO0+Il1o/iHxXc+INJ1u2lj1KVGa0eGZJrbKANv8Ak2EAjGVYk9hV/Vf7Bn+Guk6HB4t0t7zT7q5uJMW94FkDhdqqTB1+U9cD3rzyilypR5UF9bnp/gHxmmi6fZWeq+J7OXQEdnvNE1DTXnZgScrEQjLz1GXQZJyPXE8CeItI0Px9dXd1vs9Mu4Lq2Rtpf7OsikISBkkDIzjJ+tcXRTaTbb63X3gtFZep2/hDWNO8FeKpxJqdrqNlf6fLZyXdravKkHmDhjFOib8EKSuCCCep4qPxNr00nh3+yo/EWk6hbSXQnNrpWjLaICFIDs3kxHdg4wARg9eK4yihq+/9a3BO239dDttclGlfCfQdEkwLq+vJdWkTPKRlRHESO24Kx+mD3riaKKfVv+v6sHRIKKKKBBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/AFFr/wBcj/6G1V6sXH+otf8Arkf/AENqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBqRLJJII4QzPJ8oVere1b2INMjttLlZZZ5LpJLrnKx442e555rGs72fT7gT2jhJACAxQNjP1BpZ76W4j2SLABnOY7eND+aqDXPc0Nm5jttR1jVIHtvLkjEsiz723ZXn5gTjB6cAYrjK3pNWvJIXieUYdQrsEUO4HYsBk/iawaunoKQUUUVqQFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAWLj/AFFr/wBcj/6G1V6sXH+otf8Arkf/AENqr0DCiiigQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBsWr28cpa6haZQpwgbaCfc9cfSr7wW8ujf2iLRIGjnEewMxSUYyepJyPY96p6fFazXiLf3H2eAcswUkn2GAauaxcJdKnk3Vt5EPyw2sIk+QevzKAT6nrXMzUktxaTaTe3c+nQRrGoSJo3kyZG6dXPQc1yldHf3cP9l2VjaPvSNTLM2CMyN259BxXOVrDdky2CiiitCAooooAsWVlLf3SwQbN7EAB5FTPOONxGTz061vt4btobuEmRZYpL5YkU3MZ8yIEBjgHJOT0HI71l6Fe21hfGe6hjkMal4y+/IcA7QMEDk465q9LrFk1/pSxwwxwWrRyPKvmEqS25wAScjPsTx1pa3Q+jA2lldz6rbrYx2q2aSOk8bucFTgBtzEc9OMVQt9Emnigd7i3t2uTiCOViGk5xkYBAGeMnFaC61He319a6rdySWFwzmKSTc/knJKMB1A7YHY0v9rRz2ll5d5aWs1rGImE9mJCdpOGVtjHp2OMGpV7DdrmdFok7WclzPPBaxxT+Q/nFsq+M9AD+lH9hXf9qvp+6Lz1jMi4YkSDbuG045yOlT3epR3OhTxST+ZcyX5nOY9u5duN3HA57VLqGsRDxHaX9lJ5iwRxZOCMlQAw5/EU9f69Adv69TNGmTnTY70bdkk3kxpzvZsZ4GOnarE2gzwidRPbyz2y75oEYl0Hftg474Jq7rer2Z1az/srL2Vm3mIMFdzFtzdR9B+FOa90+2vtS1CC7843cUixQeWwZS/XdkbeMnoTmi7tcLK5QsbRn0i+niazl2xgyJIjGSMbgMqcYyfr0qvZ6dJdwSzmWK3t4SA80xO3J6AAAkn6CtDSms4dLvo59Rt45LuFUVSkp2kMDzhCO3bNLYX8NvptxppubdT5wljnkt/NjbjBGGUkdsHb6031F0Mu+sZbCdY5irB0Do6HKup6EVDHIYpVkUKSpyAyhh+IPBq5qt291NEHuo7kRRhFaKERKoyeAMDj8BVChAza1rY+k6TceVDHLNFIZDFEse4h8DhQB0qvb6JNPFA73FvbtcnEEcrENJzjIwCAM8ZOKluZ7W90Gxj+1JDPZrIrRSI3z5bI2kAj25xVwaulxZ2Rju7W0mtYhEwuLMSE7TwytsY/gcc0tvvA5+WJ4ZnilUq6MVZT2I7VPp9vFc30cc80cKFhkyBsNyOPlBOaju52ub2aZ5PNaRyxcqF3ZPXA6U2CTybiOQjIRw2PXBqo9Lil5Gnr+m29lq9xDZTRMBLsW3QSF0+pIwfwJpk2g3EKzjz7eSe3TfNboxLxjv22nHfBNT6rdWx146tZ3UU4adZRDtdWXvg5XHbHBNWb3V1ea6ubPULZEuFb90LBRNhuqltmPqd3vUK/Ki9LmfaaBeX9tBNZbJ1lkMbBCcxHr8/HAxznmreiaPZ3OpXEF3dW8wijkwqGT5iF++CF5APv26Gn6PqmnaRp5SRpLiW+zHciMsvkx4xx6tzn9Kr6Tc2el6/Lm48y1ZJIlnCHoy4DFcZ+tN31RKtoUotMe5vltrKeG5LKWMiblVAOSSWAxgDNF3pj21qtzHPDc27OY/MhLYVhzghgD09qt6VdQaRqT7riK4hngaJpY4ywTd32uBnBAyMdKbqN67WH2Zb+1njaQP5dtaCIZAIyTsU5/OjXoBk0UUVQgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKALFx/qLX/rkf8A0Nqr1YuP9Ra/9cj/AOhtVegYUUUUCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKANe2tZrybyraMu+CcDjAHcnsKfcWFzbRrJIimNztV43V1J9MqSM+1QxLJJII4QzPJ8oVere1bcsYsLWHSIpFe+muEeYg5WJhwF9zzz+Vc5qZ0ukXsMTvJCB5YDOokUugPdlByPxFYNdy7RTapq8VsjJdmGQPKxyjY+9heq5x3JrhqumTIKKKK1ICiiigAoq/ocaTeILCOVFdHuY1ZWGQw3Dgir1zJDc64+mC3t4LZrvy1ZIlV0G/BO7qe/B4HbGK3jR5op33dl+H+ZDnZtdjCqwtjcPp73qx5t43EbPuHDEZAx1rpb8aVHNqVncTafHFGjpbRw28gljkU/Ll9nOcYOWIqOz1GZPAl04S2Jju40XNrEQRtPUFcE+5ya0VCCbvLpfT1t3I9pKysupy1FbUkccng1rpooxO2oFTIsYU42ZwMDgZ7dK0NQs7ePx3p1utvEsLG23xBAFOQucj3pLDtta7uK/8CTf6D9qvz/A5Wiuh+0QyeJ1sBZWothfBFHkruA8zBycZIPPB49MVbuI4LyDxFEbS2iWxbdbmKFVZP3mMbhyQR65pKgpR5k+/4K7B1LOzXb8dDk6KK9s8E2GmN4V8LrcaNpdybyz1aW4e4so3eRofmjy5G4YI7HpxXK3aLf8AW1/0Nlq0u54nRXtC+GtEv/FejajfWthCreEhq80HkeVby3CBhuaOJfu8BmVF52njk1z99H4a1/TdLtLnVtFk1qTVo4TLo2nyWifZJOG3AwxpuVuhxnB5Jo15uX+t7fp9waW5v62ueb0V7PphsLz4geLfD83hrSU0/S7C9FmgsIxJAYl2q5kxvcnrli3JBGKzNBsbLQl8M2WsNZPPrCxTpZReH4L1pY5HwvmTSurITyMR9APWlGXNa3W343/yCS5U79L/AIW/zOI0LwbrHiXyl0ZbGeWZykcD6lbRTOR6RvIHP5VT1XRLvRmjF5JYuZM4+yX8FzjHXPlO23r3xmvQvC2l22iftMRabYJstbXVZo4UyTtQB8DJ5OBxWF8OdH03VvF1++sCB4dPsbm9WK53+U7xjK7wgLFRncQASQuMGhS5lzLa1/wKcbNxfdL77nE0V3fie60C78HxSf2jolz4hhvvkOkadJaxvbFeQ6mGNCVYDBxnB5JrsdS0yxt/hafHEfhG3j1q8tI7eS3MERtreM5X7asGMLv2gDjAPOO5HKybYkrtI8jh0PUZ9AuNait92n20ywSzb1G12GVG3OTnHUDFZ9eqaH4ivYfgTrMqQaaWttStYUD6XbOpXYeXBjIduPvNlvevL55mubiSaQIHkYswjjVFBJzwqgAD2AAFO/vNdv8AJP8AUX2U/wCt2iOiiimIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAsXH+otf+uR/9Daq9WLj/AFFr/wBcj/6G1V6BhRRRQIKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA2bO9n0+4E9o4SQAgMUDYz9QadNfzTptdYF5zmO3jQ/mqg0WIh8ySS5iMyRxltgfbuOQOT6c1eS0t9Q05biOFbWQXKQsI2ZlYN3wxJyPrXOalWXWL6aORJJh+8G2RhGoZx6FgMn8TWBXWz2tm93qFnFbCI2iOyTB2LMU/vZOOfYDFclV0yZBRRRWpAUUUUASW88lrcx3EDbJYnDo2AcEHIPNJLK807zStmR2LMcYyScmmUU7u1gstzQm1u/uI2WaVHLLsaQwp5jDpgvjcfxNRWep3VjHLHbunly43xyRLIrY6cMCKqUVXtJ35ru5PLG1rF631e8tUmSGSMRzPveNoUZd3YhSMA/TFJNq99canHqE05e6jKlZCo4K9OMYPSqVFP2k7JXegcsb3sTi7nW+F4H/fiTzd+B97Oc46dakGqXg+2Ym/4/f9f8o+fnPpxz6YqpRUqUkrJ/09x2TCt2y8Z69p1rZW9nf+XFYxzxW6+TGdizDEoyV5z75x2xWFRU7qxRtN4v1432mXi6jJHc6TbrbWcsSqhiiXOF+UDcPmIOc5BIORUeqeJdT1iBYLx7ZIQ/mGO0sobZWfpuYRIu48nk561k0UAerWnjxdM0/Vry98UW+sXF5prWkEMOmmG6kd0CBriUxjcEGeDJJk4+tcXZePPEWn2VpbWt9GFsQVtJXtIXmtwTkiOVkLoM9gwrnaKVtb/1/WodLf1/WhsReKtZh8WHxLHeY1czNObnyk++2cnbjb3PGMVS0/Vb7SdUi1HTbqS2vImLJNEcEE9fwIJBHQgkVUoppJbA9dzY1HxRqmqJHHdNaLGkom8q3sYIEdx/Eyxooc8n7wPU1aPj3xM2u3GsPqjNeXNubWYtFGY3hK7fLMZXZtx22479a52ilZBc1tG8TaroNvdW+nTRfZ7vb59vcW0VxFJtOVJSRWXIzwcZrNnma5uJJpAgeRizCONUUEnPCqAAPYAAVHRT8xBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBYuP9Ra/9cj/6G1V6sXH+otf+uR/9Daq9AwooooEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAf/9k=)

‑ fonction qui permet de récupérer le texte des balises XML

La fonction *recuperationText()* est une fonction qui prends une chaine de caractère en paramètre et renvoie une chaine de caractère en sortie. Décortiquons-la un peu plus la variable qu’elle prends en entrée est le chemin vers le dossier XML. Une amélioration possible de cette fonction serait via une interface graphique de demander à l’utilisateur ou serait le dossier XML car l’inconvénient d’enregistrer dans le code le chemin c’est qu’on ne peut pas le changer autrement qu’en le cherchant dans le code ou via un *input.*

Pour pouvoir extraire des données XML via python il faut utiliser la librairie *Etree* qui permet d’aller chercher le dossier XML et ensuite de l’exploiter via des fonctions comme *getRoot()*  qui renvoie un objet de type Root. Comme on le voit sur l’image on remplis une liste avec toute les balises *text[[2]](#footnote-2)* ensuite on transforme via la méthode *join()* la liste en string et on retourne un assez grand texte au format *string* avec dedans toutes nos pages exportées.

# Traitement des données

## Recherche de règles générales

L’extraction des noms et prénoms des tueurs est généralement assez simple parce que dans le premier dossier que l’on utilise et qui se nomme : *enSK.xml*. Ils se présentent sous cette forme :

« *Martha Rendell: killed three stepchildren with chloridric acid in 1907-08; last woman to be hanged in Western Australia* »

Ce qui nous permet de faire un algorithme qui dirait que derrière chaque puce la première Entitée Nommée représente le tueur. Il faut ensuite réfléchir à comment trouver ses crimes et il existe autant de moyens d’aborder ce sujet que de verbes pour designer un meurtre. En lisant plusieurs documents on a trouvé quelques verbes récurrents comme : *Poisoning, Assassinated, Demembred, Killed…* Une fois l’extraction de ces verbes est faite il faut voir si on peut déduire des règles générales.

On a donc notre mot cible qui est le verbe et l’on va donc s’intéresser aux mots autours. Cela nous a permis de déduire des règles comme :

- Apres un *who* on aura toujours le verbe *murdered* et un nombre de personne comme par exemple : *who murdered five people …*

- Aprèsun « of », on sait que cela concerne les victimes :

• Cela peut être un **chiffre**, en nombre ou en lettre comme par exemple : *poisoner of three individuals*

• Cela peut être un **mot-clé** : en Xml, ça ressemble à [[mot-clé]] : si le mot-clé peut être un nom commun (comme le mot prince), on peut tomber sur un nom propre (qui nous intéresse, car ça va être celui de la victime)

- Au lieu de « of », on peut tomber sur un mot de « viser » comme par exemple *perpetrated* ***against***

## Présentation des différentes fonctions du code

**Tri(doc)**: est une fonction qui prend en entrée un texte et qui ressort une liste qui contient les noms propres associées à leurs positions dans le texte.

**Temporel(doc)**: est une fonction qui prend en entrée un texte et va associer chaque entité nommée à un indice temporel.

**Localisation(doc)**: est une fonction qui prend en entrée un texte et va associer chaque entité nommée à un indice de lieu.

**Association(doc)**: est une fonction qui prend en entrée un texte et va associer le nom du tueur à ses victimes.

**Deduction1(doc1,doc2)**: est une fonction qui prend en entrée 2 textes et va garder les noms propres associés à une date/lieu suivant la liste des victimes.

## Implémentations des règles en python

Le but du programme **tri(doc)** est de reconnaître avant tout, les personnes qui ont été tué par le tueur : isoler seulement les noms propres ne suffit pas car certains peuvent ne pas être des victimes ou être des noms de bâtiments. C’est pourquoi, il faut commencer à partir des mots (noms communs et verbes) en relation avec le meurtre. On les mettra dans une liste (dans le programme, il est nommé « kill »).

On constate alors qu’il peut y en avoir beaucoup : avec un seul mot, on peut partir sur d’autres par « dérivations » (en ajoutant un suffixe par exemple) ; ce mot est nommé un lexème. Par exemple, avec le mot « kill », on peut obtenir « killing », « killer », « killed », etc. À noter que si le lexème peut être un verbe, on peut le dériver pour en faire un nom commun.

Afin de réduire efficacement la liste des mots en relation avec le meurtre, on y met seulement des mots basiques : lorsqu’on analyse le texte, on « réduit » si possible chaque mot lu en leur lexème (en supprimant les suffixes par exemple).

On remarque aussi que ce soit le lexème ou ses dérivations, ces derniers suivent les règles citées précédemment. De ce fait, se contenter des lexèmes simplifient le programme tout en gardent une certaine qualité de lecture.

De l’autre côté, il faut évidemment reconnaître les noms propres, mais aussi les regrouper : en rapport avec une des règles d’implémentation, après un mot en relation avec le meurtre, le mot « them » se rapport à plus d’une personne.

Or, si avec « him » ou « her », il suffit de se rapporter au dernier nom propre enregistré, pour « them », il faut savoir jusqu’à combien de noms propres enregistrés, il faut prendre. De ce fait, il faut regrouper des noms propres proches, entre eux. Après avoir lu un nom propre, le programme compte la distance entre ce mot, le dernier nom propre enregistré : s’ils sont assez proches, le mot est mis avec le dernier nom propre enregistré (dans une liste) ; sinon, le programme met ce mot dans un nouveau groupe (en créant une nouvelle liste). À noter qu’en absence d’une virgule ou de « and », le programme rallonge artificiellement la distance afin d’éviter tout confusion : un point provoque la séparation de deux groupes de noms propres entre eux.

Par ailleurs, tout ce qui se trouve entre les noms propres est ignoré : on sait que sur un mot en relation avec le meurtre, l’énumération de noms propres est logiquement terminée et le programme force donc une nouvelle séparation avec les prochains qu’il va rencontrer.

En conséquent, la liste qui va contenir tous les mots du texte est une liste de liste : les noms propres proches entre eux sont regroupés dans une liste ; afin de rendre la lecture de cette liste plus fluide, tous les mots (incluent les noms propres isolés), seront mis dans une liste (qui contient qu’un seul élément). De ce fait, une fois ce regroupement terminé, il suffit de lire cette liste, d’identifier que le mot en relation avec le meurtre, puis déduire avec ce qui suit, quel(s) noms propres y est/sont associés (et donc les mettre dans une liste qui contient logiquement les noms des victimes du tueur). À noter que le nom du tueur sera ignoré pour des raisons évidentes…

# Annexe

## La GUI

Nous avons décider de faire une partie graphique qui peut se lancer indépendamment de la partie en ligne de code pour pouvoir permettre à l’utilisateur d’avoir la possibilité d’importer des pages xml et d’ensuite de pouvoir les analyser via notre interface. Les fonctions restent les mêmes que pour le programme en ligne de code.

## Les différents scripts

Nous avons décider de faire plusieurs scripts python pour rendre le code plus lisible :

* **File.py**: c’est le script qui s’occupe de tous les traitements qui n’ont aucun rapport avec l’analyse du corpus. Dans ce script on va trouver les fonctions pour extraire le texte des balise xml, ainsi que des fonctions qui aideront l’interface graphique.
* **WhoKillWho5.py**: c’est le script qui va s’occuper du traitement et de l’analyse du corpus avec des fonctions que l’on a expliquées plus haut. On l’a nommé ainsi car c’est la cinquième version de notre script pour l’analyse de corpus. Il apporte les fonctions qui permettent de déterminer où s’est fait le meurtre.
* **wkwGUI.py** : c’est le script qui permet de lancer l’interface graphique.

# Conclusion

# Deuxième solution WhoKillWho- Le Retour

## Pourquoi une deuxième version ?

Nous avons voulu exploiter les outils et concept vus en classe : la détection d’Entités Nommées et l’analyse sémantique. Aussi l’idée nous est venue d’utiliser des principes vus l’an dernier en TAL et en Automate et Grammaires et donc d’essayer d’analyser les phrases pour en tirer des arbres syntaxiques.

## Analyse sémantique :

A l’aide de Wordnet nous avons développés différents outils capables de tester si un mot faisait référence

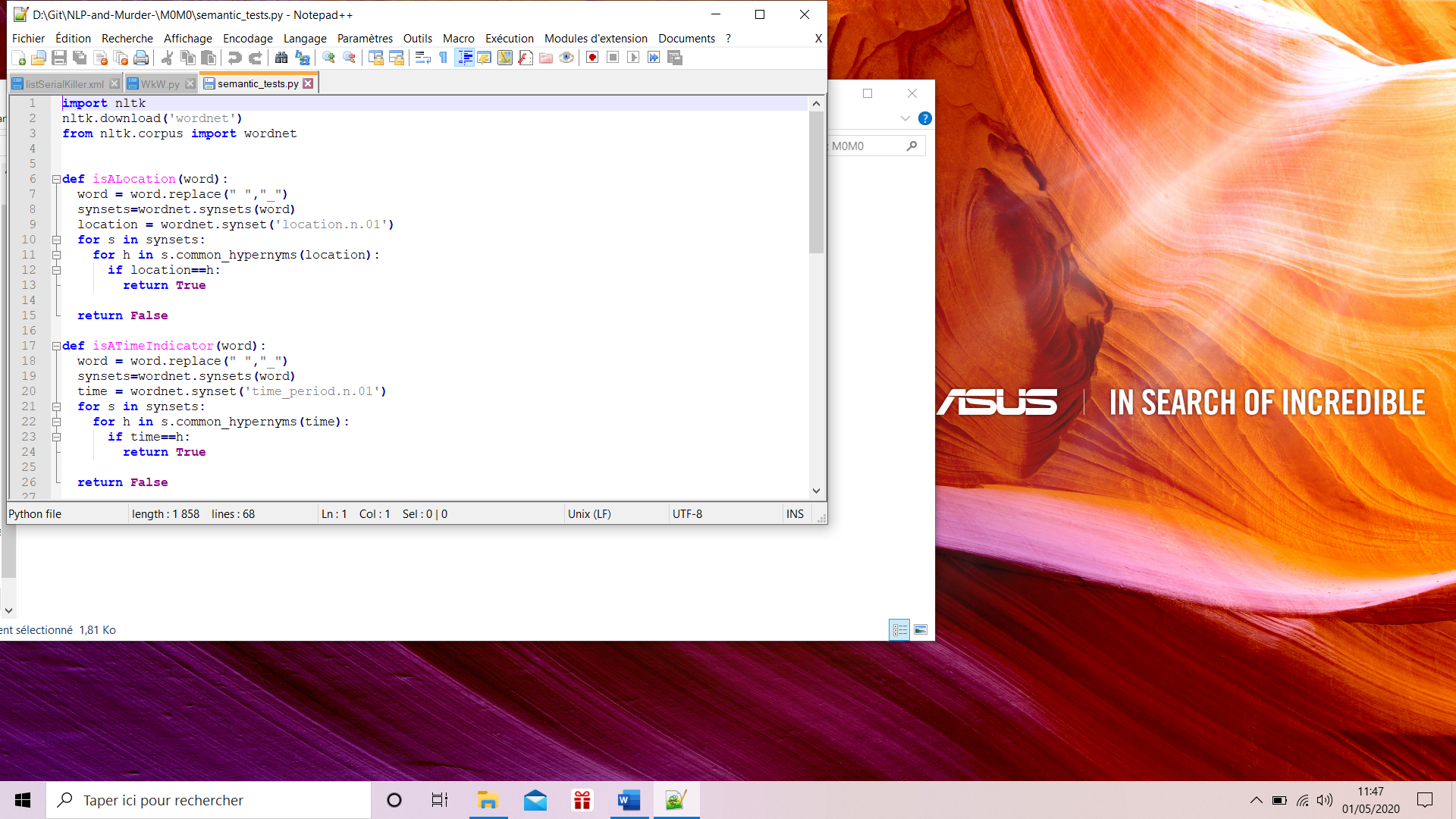
* à un lieu (ex : isALocation(‘Panama’) : True),
* à un meurtre (ex :isMurder(‘slaughter’) : True),
* à une période de temps (isATimePeriod(‘December’) : True)
* et à une personne pour les noms communs mais pas les noms propres (isAPerson(‘child’) : True) 

Figure : Exemple de isALocation

Toutes ces fonctions procèdent de la même manière : On a au préalable récupéré un ou des synsets avec le sens que nous recherchions (ex : location = wordnet.synset(‘location.n.01’)).

On parcourt tous les sens du mot analysé et pour chacun de ces sens on parcourt tous les hyperonymes communs de ce sens et du ou des synsets que nous avions présélectionnés (ici dans l’exemple location).

Si le mot n’est pas un hyponyme du des mots (ici hyponyme de location, le mot n’est donc pas un lieu) que nous cherchons, alors le ou les synsets que nous avons présélectionnés n’apparaitront pas dans les hypernymes communs. (ex : ‘location’ n’apparaitra pas dans ses hypernymes communs avec ‘potato’). S’il s’agit d’un hyponyme on va retrouver ces synsets dans les hyperymes commun. (ex : ‘location’ apparaitra dans ses hypernymes communs avec ‘New\_York’).

Remarque : pour isMurder il a fallu détecter les mots référant au suicide car ils avaient dans leurs hypernymes kill/killing.

## Entités Nommées et Analyse Syntaxique

1. Source : <https://openclassrooms.com/fr/courses/1766341-structurez-vos-donnees-avec-xml/1766421-quest-ce-que-le-xml> [↑](#footnote-ref-1)
2. Le chemin *"{http://www.mediawiki.org/xml/export-0.10/}text"* fonctionne pour n’importe quel document il n’est pas spécifique au document *enSK.xml*. [↑](#footnote-ref-2)