

```
def process_contacts():

    # 读取联系人文件

    with open('contacts.txt', 'r', encoding='utf-8') as f:

        contacts = [line.strip().split() for line in f if line.strip()]

    # 处理数据并准备排序

    processed = []

    for contact in contacts:

        if len(contact) < 3: # 处理可能的不完整数据

            continue

        name, gender, email = contact[:3]

        username, domain = email.split('@') if '@' in email else ("", "")

        # 确定称呼

        if gender == '男':

            title = '先生'

        elif gender == '女':

            title = '女士'

        else:

            title = '用户' # 处理未知性别的情况

        processed.append({

            'name': name,

            'title': title,

            'email': email,

            'domain': domain,

            'username': username
```

```
})
```

```
# 排序：先按域名，再按用户名
```

```
processed.sort(key=lambda x: (x['domain'], x['username']))
```

```
# 生成输出内容
```

```
output = []
```

```
for contact in processed:
```

```
    line = f'to: <{contact['email']}>\n 尊敬的{contact['name']}{contact['title']}, 您的会员资格即将到期, 请及时续费。\\n---'
```

```
    output.append(line)
```

```
# 写入 emails.txt 文件
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```
with open('emails.txt', 'w', encoding='utf-8') as f:
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```
    f.write('\\n'.join(output))
```

```
if __name__ == '__main__':
```

```
    process_contacts()
```

