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Department of Computer Science  
Faculty of Science &Technology (FST)  
Fall 21 22

Section: E  
Software Quality Assurance and Testing

Recycle Trash For Plastic Bottles

A Report submitted By

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Software Test Plan

for

Recycle Trash For Plastic Bottles

Version 1.0 approved

Prepared by

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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Revision | Date | Updated by | Update Comments |
| 0.1 | 2022.11.27 | Promel Mohammad Jeeva | First Draft |
| 0.2 | 2022.08.12 |  | Second Draft |
| 0.3 | 2022.08.13 |  | Third Draft |
| 0.4 | 2022.08.13 |  | Fourth Draft |
| 0.5 | 2022.08.13 |  | Fifth Draft |
| 0.6 | 2022.08.13 |  | Sixth Draft |
| 0.7 | 2022.08.14 |  | Seventh Draft |
| 0.8 | 2022.08.15 |  | Eighth Draft |
| 0.9 | 2022.08.15 |  | Ninth Draft |
| 0.10 | 2022.08.16 |  | Tenth Draft |
| 1.0 | 2022.08.16 |  | Final Draft |

# TEST PLAN IDENTIFIER:RS-MTP01.3

# REFERENCES

* Software Quality And Testing Course PowerPoint Slides
* Software Test Documentation

# INTRODUCTION

## 3.1 Background to the Problem

We often throw out our unused bottles. Unused bottles could be our Daily life water bottles, bottles of various drinks that mix various elements of the environment such as soil, and water causing environmental balance. Again, these unused bottles accumulate in our home and cause our home burdens. These unusable bottles are no longer used for any of our purposes and occupy the place of residence.

## 3.2 Solution to the Problem

Our aim is to recycle these unused bottles. We want to create a platform where people can sell their unused bottles. These unusable bottles will be collected and recycled by our platform. Collecting unusable bottles and turning them into usable items can no longer upset the balance of the environment. Moreover, people can earn some money by selling these unusable bottles to us instead of keeping them at home. Through this system it will be possible to collect the unused items without any manual labor. Those unusable items can be recycled and sold in the outside market.

# REQUEIREMNT SPECIFICATION

## System Features

**1.Employee/buyer Feature**

1.1 At first Registration

1.2 Email must be confirmed after registration.

1.3 Then login to the website.

1.4 Then Logout System

1.5 Can change the password

1.6 Can see all bottles (unusable bottles with different categories)

1.7 Can delete any bottles after select.

1.8 Can see all seller with rating & earning point

1.9 Can contact seller

1.10 Can add or remove discount code

Priority Level: High

Precondition: Admin must have valid user name and password

**2.Admin Feature**

2.1 At first Registration to make their own account

2.2 Email must be confirmed after registration.

2.3 Then login to the website.

2.4 Then Logout System

2.5 Can change the password

2.6 Can see all bottles (unusable bottles with different categories) and delete any bottles

2.7 Can View & Delete any employee

2.8 Can see all seller profile

Priority Level: High

Precondition: Employee must have valid user name and password

**3.Seller Feature**

3.1 At first Registration

3.2 Email must be confirmed after registration.

3.2 Then login to the website.

3.3 Then Logout System

3.4 Can change the password

3.5 can add bottles to the website in different categories

3.6 can delete or edit own bottles

3.7 Can contact system admin through email

3.8 Can add Bkash/Nagad Information

3.9 Can see own profile rating & earing point

Priority Level: High

Precondition: Seller must have valid user name and password

## System Quality Attributes

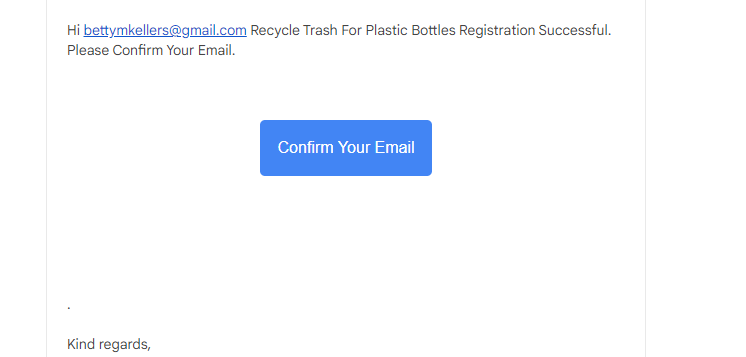
1. **Usability:** The application should be user-friendly. Our system features are easy to learn because navigation is very simple the system is also easy to learn to use for new or infrequent users.
2. **RELIABILITY AND CORRECTNESS:** Our software gives the exact output that the user wants, its accuracy is guaranteed. Already tested and no false output is generated.
3. **Modularity**: Every system we have to develop module-wise. we can easily detect bugs in any module and then we just have to solve that particular module. Also, we can also add new features to our system as it has been developed module-wise.
4. **Maintainability:** It means how easily the maintenance team can perform their task. : It is the capability of the system framework. Maintainability allows to set up the framework after the failure.
5. **Efficiency:** Major system quality attribute. Measured in terms of time required to complete any task given to the system. The application will have large scale in efficiency.
6. **TESTABILITY:** It means how easily the testing team can perform their task. The system will properly be testing the project and implement the design
7. **FLEXIBILITY:** In our system we can easily add any module without any hesitation. From the beginning we have made the design of the module very simple so we can add modules very easily.

## System Interface

**1. Registration Interface:**

****

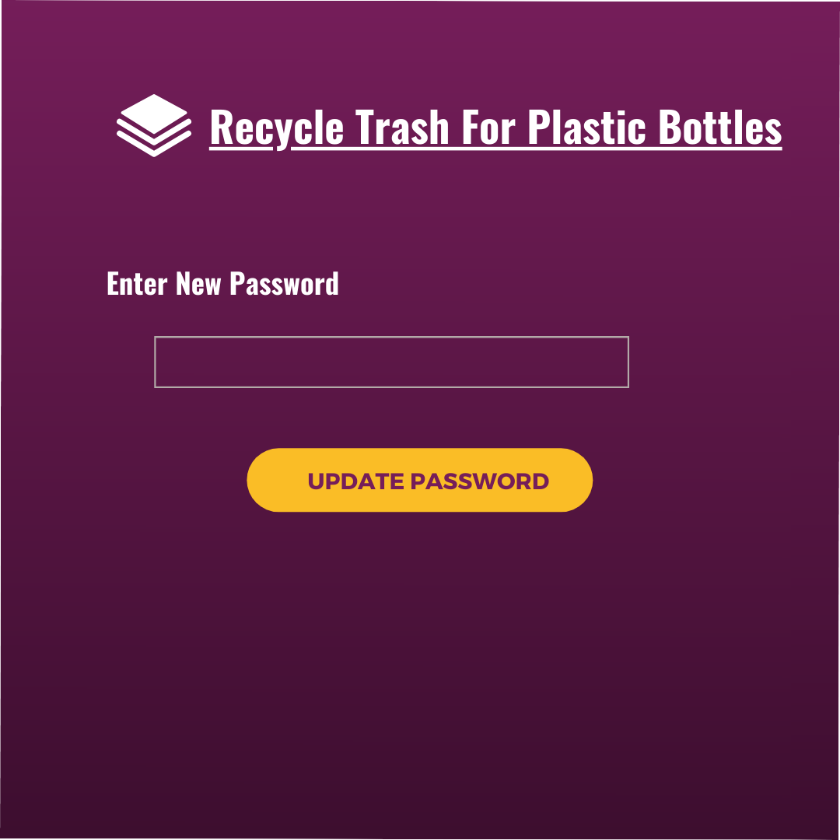
**2. Email Confirmation Interface:**

****

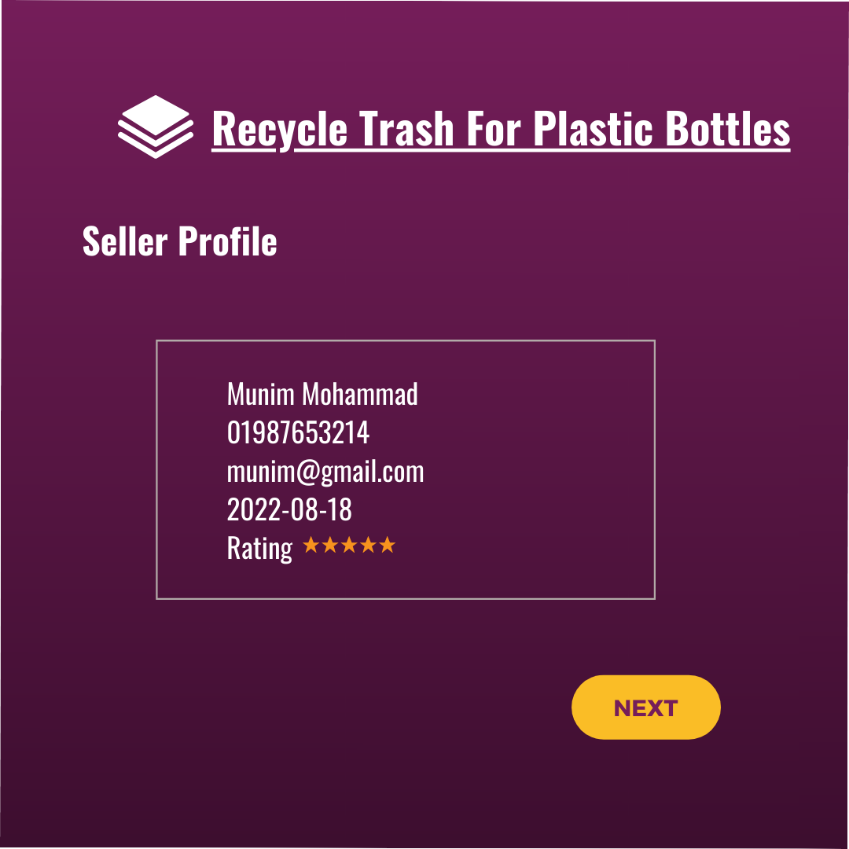
**3. Login Interface:**

****

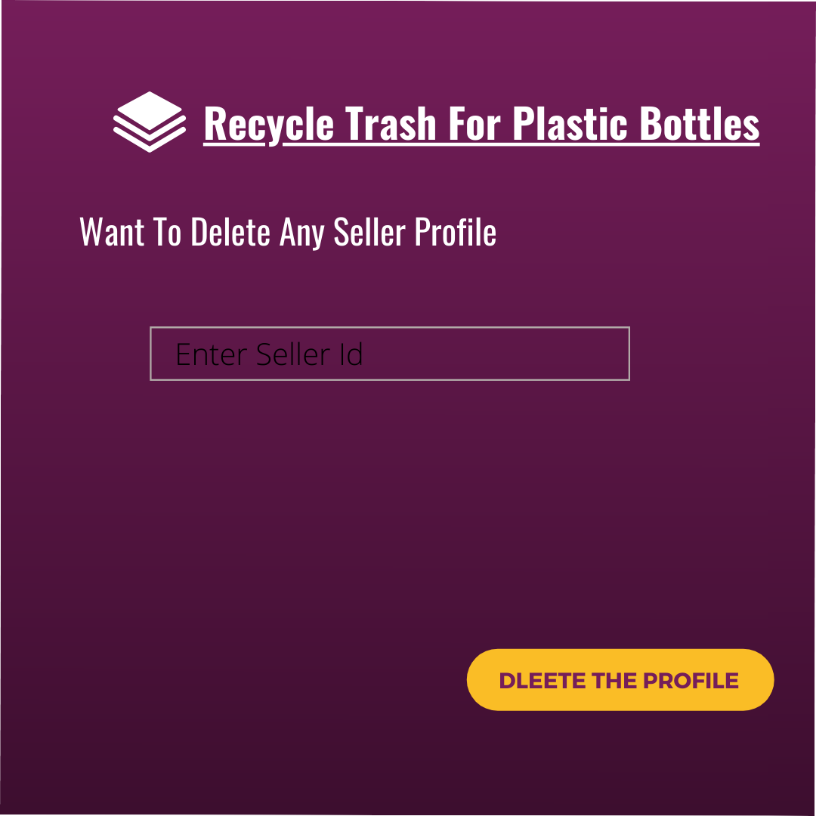
**4. Password Change Interface:**

****

**5. Seller interface:**

****

**6. Delete Seller Interface:**

****

**7.Product Interface:**

****

**8. Delete product interface:**

****

## Project Requirements

Effort Estimation:

Our project is to develop an application named “Recycle Trash For Plastic Bottles”.

Development Time = 2 Months

Required number of peoples = 4

Budget Estimation:

Duration in weeks = 2\*4 = 8 weeks

Office days = 5 days

Working hours = 8 Hours

per week working hours is = (5\*8) hours

= 40 hours

Total Working hours is = (40\*8) hours

= 320 hours.

Developer salary is = 2000 Taka

Total developers Salary = (2000\*320) Taka

## = 640000 Taka

|  |  |  |
| --- | --- | --- |
| Expanse | Amount | Total Amount |
| Salary for 2 developers |  | 640000 Taka |
| 3 months office rent | 3\*15000 | 45000 Taka |
| Electricity and other costs |  | 12000 Taka |
| Travel Cost | 5000 | 5000 Taka |
| Total Cost |  | 702,000 Taka |
| 22% of total cost(profit) |  | 154,440 Taka |
| Now total budget is |  | 856440 Taka |

# FEATURES NOT TO BE TESTED

The following is a list of the areas that will not be specifically addressed. All testing in these areas will be indirect as a result of other testing efforts. For example:

**Confirmation Email:** When the registration will be done then all user gets it confirmation email. It will be released but this has not been tested yet

**Seller Profile Rating:** Seller's profile will show rating and earning points but this has not been tested yet

**Bkash/Nagad:** Seller can add Bkash or Nagad information in his profile it will be released but this has not been tested yet. ­

## 6.1 Testing Levels

* The testing for the SMS project will consist of Unit, System/Integration (combined) and Acceptance test levels. It is hoped that there will be at least one full time independent test person for system/integration testing. However, with the budget constraints and timeline established; most testing will be done by the test manager with the development teams’ participation.
* UNIT Testing will be done by the developer and will be approved by the development team leader. Proof of unit testing (test case list, sample output, data printouts, defect information) must be provided by the programmer to the team leader before unit testing will be accepted and passed on to the test person. All unit test information will also be provided to the test person.
* SYSTEM/INTEGRATION Testing will be performed by the test manager and development team leader with assistance from the individual developers as required. No specific test tools are available for this project. Programs will enter into System/Integration test after all critical defects have been corrected. A program may have up to two Major defects as long as they do not impede testing of the program (I.E. there is a work around for the error).
* ACCEPTANCE Testing will be performed by the actual end users with the assistance of the test manager and development team leader. The acceptance test will be done in parallel with the existing manual ZIP/FAX process for a period of one month after completion of the System/Integration test process.

## 6.2 Test Tools

The only test tools to be used are the standard AS/400 provided utilities and commands.

* The Program Development Manager (PDM) will be used as the source version configuration management tool in conjunction with the in-house check-in/check-out control utility. The check-in/out utility is part of each developer’s standard AS/400 access menu.
* The initial prototypes for the new screens will be developed using the AS/400 Screen Design Aid (SDA). The initial layout and general content of the screens will be shown to the sales administration staff prior to proceeding with testing and development of the screens.
* For this we used a tool called Selenium to test our demo project. As it a web based automated testing tool our work will be easier and faster.
* Reason behind use Selenium:
  + Easy to use.
  + User friendly.
  + Accept many programming languages.
  + Accept multiple OS.
  + Open-source platform.

## 6.3 Meetings

One of the key factors in having a successful testing team is distributing the right work to the right people. Therefore, regular team meetings are very important to be a successful team. The testing team will meet once every two weeks to assess progress to date and identify error trends and issues as early as possible. And check if they are facing any problem about testing then other team will help him and try to solve as soon as possible. The test team leader will meet with the development and project manager once every two weeks. Additional meetings may be called in case of emergency.

# 7 TEST CASES/TEST ITEMS

**Log In:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Name:** Recycle Trash For Plastic Bottles | | | **Test Designed by:** Promel Mohammad Jeeva | | |
| **Test Case ID:**  FR\_01 | | | **Test Designed date:** 27-11-2022 | | |
| **Test Priority (Low, Medium, High):** High | | | **Test Executed by**: Promel Mohammad Jeeva | | |
| **Module Name:** Login Session | | | **Test Execution date:** 27-11-2022 | | |
| **Test Title:**  verify login with valid username and password | | |  | | |
| **Description:** website login page | | |  | | |
| **Precondition (If any):**  User must have valid username and password | | | | | |
| **Test Steps** | **Test Data** | **Expected Results** | | **Actual Results** | **Status (Pass/Fail)** |
| 1. Go to the website.  2. Click the “Login” button.  3. Enter Email  4. Enter password.  5. Click “Submit” button | Username: XYZ1234  Password: BD@12345 | Users should  Login to the  website | | As expected, | Pass |
| **Post Condition:** User is validated with database and successfully login to account. The account session details are logged in the database. | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Name:** Recycle Trash For Plastic Bottles | | | **Test Designed by:** | | |
| **Test Case ID:**  RG\_01 | | | **Test Designed date:** -2022 | | |
| **Test Priority (Low, Medium, High):** High | | | **Test Executed by**: | | |
| **Module Name:** Registration | | | **Test Execution date:** -2022 | | |
| **Test Title:**  Registration with Full Name, email, password & role options. | | |  | | |
| **Description:** website registration page | | |  | | |
| **Precondition (If any):**  User must have valid Email & role options to select. | | | | | |
| **Test Steps** | **Test Data** | **Expected Results** | | **Actual Results** | **Status (Pass/Fail)** |
| 1. Go to the website.  2. Click the “Registration” button.  3. Enter All Info Field  4. Click “Submit” button | First Name : XYZ  Email : [xyz@gmail.com](mailto:xyz@gmail.com)  Options : Seller | Users should  registration to the  website | | As expected, | Pass |
| **Post Condition:** User is validated with database and successfully register to account. The account session details are logged in the database. | | | | | |

**Registration:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Name:** Recycle Trash For Plastic Bottles | | | **Test Designed by:** | | |
| **Test Case ID:**  SP\_01 | | | **Test Designed date:** | | |
| **Test Priority (Low, Medium, High):** High | | | **Test Executed by**: | | |
| **Module Name:** Seller Profile | | | **Test Execution date:** -2022 | | |
| **Test Title:**  Show all the seller profile. | | |  | | |
| **Description:**  seller profile | | |  | | |
| **Precondition (If any):**  User must have login & seller profile | | | | | |
| **Test Steps** | **Test Data** | **Expected Results** | | **Actual Results** | **Status (Pass/Fail)** |
| 1. Go to the website.  2. Log In  3. Then go to seller profile | First Name :  Email : [mr@gmail.com](mailto:mr@gmail.com)  Options: Seller | Can See the seller info | | As expected, | Pass |
| **Post Condition:** Successfully visible to seller profile all info | | | | | |

**Seller Profile:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Name:** Recycle Trash For Plastic Bottles | | | **Test Designed by:** | | |
| **Test Case ID:**  PA\_01 | | | **Test Designed date:** -2022 | | |
| **Test Priority (Low, Medium, High):** High | | | **Test Executed by**: | | |
| **Module Name:** Add Products | | | **Test Execution date:** -2022 | | |
| **Test Title:**  Add Products | | |  | | |
| **Description:** Test the add products option with unique id | | |  | | |
| **Precondition (If any):**  User must have Login in the website & go to products page | | | | | |
| **Test Steps** | **Test Data** | **Expected Results** | | **Actual Results** | **Status (Pass/Fail)** |
| 1. Go to the website.  2. Log In  3. Go to products page  4. Click add product option. | Water Bottle  30ml  Product ID: 01 | Add the products from the product page | | As expected, | Pass |
| **Post Condition:** User is validated with database and successfully login to account. And can add the products with valid unique id. | | | | | |

**Products Add:**

# 8. ITEM PASS/FAIL CRITERIA

Here we have implemented total of 4 test cases. At first, 86% of the test cases passed successfully and 24% failed when the test cases were applied to the system. When test cases are executed after query-related issues are resolved, all test cases pass successfully.

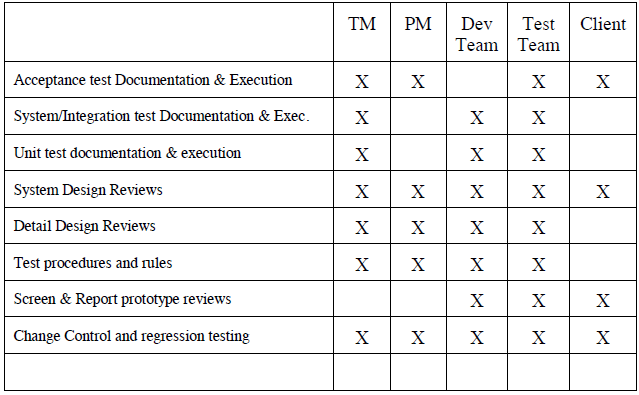
# 9. TEST DELIVERABLES

* Acceptance test plan
* System/Integration test plan
* Unit test plans/turnover documentation
* Screen prototypes
* Report mock-ups
* Defect/Incident reports and summaries
* Test logs and turnover reports

# 10. STAFFING AND TRAINING NEEDS

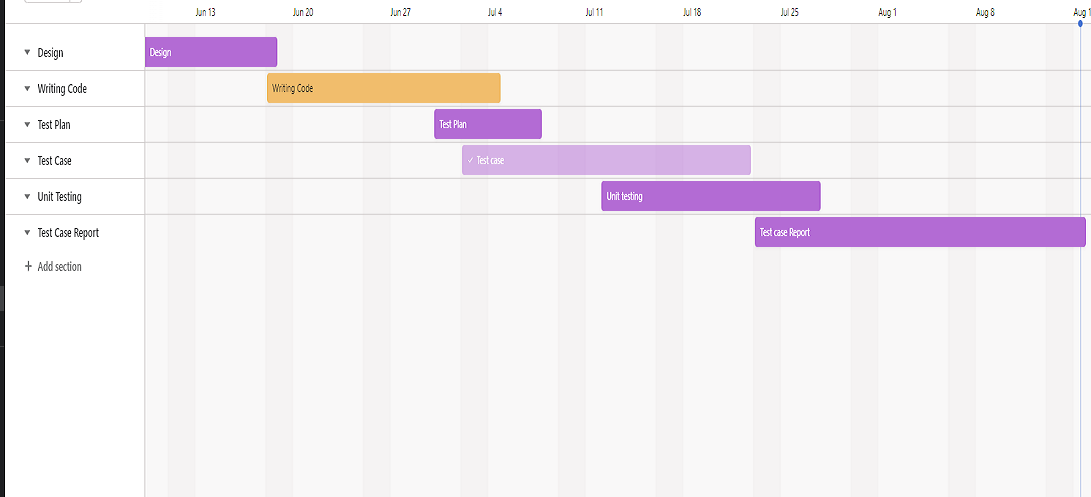
Staffing and training play an important role in any project. Project managers, test managers, test engineers, need to be trained in these areas. Training to use any tool in the project. If test items are not trained or available at this time, the team leader or project manager will assume this role. Actually, test item section and responsibility section are required for this section. Because both clauses will affect this clause.

# RESPONSIBILITIES



# TESTING SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team, development team, management and customer will be handled by the project manager in conjunction with the development and test team leaders.



# PLANNING RISKS AND CONTINGENCIES

Several panning risks and unforeseen events occur during project preparation. In fact, risk management primarily focuses on actions taken before a risk occurs. It demonstrates the steps taken after an identified risk has occurred, so as to minimize its impact. So, we have to follow some steps:

o Identifying risks and triggers.

o Categorize and prioritize them.

o Monitor risks and act accordingly

# APPROVALS

|  |  |
| --- | --- |
| Project Sponsor- Farzana Binte Alam | Approved |
| Development Management – | Approved |
| EDI Project Manager – | Approved |
| RS Test Manager – | Approved |
| RS Development Team Manager – | Approved |
| Reassigned Sales – | Approved |
| Order Entry EDI Team Manager – | Approved |